



## **CROSS-CUTTING ACTION PLAN**

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# **GFNMS DRAFT MANAGEMENT PLAN**

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## **CROSS-CUTTING INTRODUCTION**

Cordell Bank, Gulf of the Farallones and Monterey Bay National Marine Sanctuaries (CBNMS), (GFNMS), and (MBNMS) are located adjacent to one another along a 350-mile stretch of the north-central California coast. All three sanctuaries are managed by the National Marine Sanctuary Program (NMSP), share many of the same resources and issues, and have some overlapping interest and user groups. There are many opportunities for these sites to work cooperatively, share assets, and address resource management issues in a coordinated manner.

The three sanctuaries continue to coordinate on many important resource management issues, such as oil spills and volunteer monitoring. However, each site is, for the most part, managed independently of the others. The three sanctuaries have separate administrative staffs, sanctuary advisory councils (SACs), and independent education, research and resource protection programs. As a result, opportunities to maximize collaborations and share resources have not fully been realized.

### **GOALS**

The goal of the cross-cutting action plans is to build upon existing coordination efforts and identify some activities that should be jointly implemented so that these three sites can operate as integrated and complementary sites to better protect the sanctuary resources. This will ensure that scarce program resources are used more efficiently and result in a more consistent and coordinated delivery of programs, products and services to the public. Cross-cutting actions plans were developed to address: Administration and Operations; Northern Management Area; Community Outreach; Maritime Heritage; and Ecosystem Monitoring. Though the implementation of other activities contained in the site-specific plans may also be effectively coordinated, the NMSP determined that the cross-cutting action plans would be jointly developed and implemented jointly across the three sites.

### **IMPLEMENTATION WITHIN THE CONTEXT OF A NEW REGIONAL STRUCTURE**

NMSP efforts to address certain priority issues in a cross-cutting framework was a first step in a larger effort to begin looking at sanctuary resource management issues in a regional or ecosystem-based context. Since the cross-cutting plans were developed, the NMSP has been slowly moving toward adopting a new regional management structure. This new regional structure establishes four regions, including a West Coast region, which will be led by a regional superintendent. The purpose of this new structure is to maximize program integration among the NMSP sites, regions, and national program and to other state and federal programs and partners – across all levels. The regional structure dedicates program leadership and regional staff resources directly towards integrating programs and forging partnerships that supports the National Oceanic and Atmospheric Administration's (NOAA's) evolving ecosystem-based management approach.

The regional superintendent and staff will be based in the region and dedicate their efforts towards addressing priority regional issues and capitalizing on regional opportunities and partnerships. In the case of the Joint Management Plan Review (JMPR), some of their expertise and responsibilities could include working closely with individual sanctuary staff to coordinate the implementation of certain cross-cutting action plans. For example, regional ecosystem monitoring has emerged as a NOAA priority. To be effective, this requires the integration of sanctuary monitoring activities not only across the three sites in the JMPR, but those at partner state and federal agencies and at other marine sanctuaries such as Channel Islands and Olympic Coast. Regional staff could clearly play an important role in helping coordinate and ensure the linkages as the various site or cross-cutting ecosystem monitoring plans are being implemented. Regional staff and resources may also be involved in helping coordinate or implement the community outreach and maritime heritage action plans. However, it may also be appropriate for individual sanctuaries to either share the lead for implementing the cross-cutting action plans or for one site to take the lead. Ultimately, determining who will take the lead on cross-cutting action plan implementation will be worked out after the regional structure and priorities get established, and after full consideration of the staffing and resources available at each of the three sites.



# **ADMINISTRATION AND OPERATIONS ACTION PLAN**

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## **GOALS**

The goals of cross-cutting Administration and Operations for the Joint Management Plan Review (JMPR) are to (1) improve coordination and cooperation across the three sanctuaries to better and more efficiently manage and protect sanctuary resources, and (2) for the individual sites to start working and functioning as an integrated team. Fulfilling these goals for the three sanctuaries requires enhancing communication and collaboration among and between managers, program staff and the newly established National Marine Sanctuary Program (NMSP) regions.

## **ISSUE DESCRIPTION**

During scoping meetings, the NMSP received many comments relating to the need to coordinate various administration and operations across the sites. The three sanctuary advisory councils (SACs) and sanctuary staff identified several of these issues as priority items to address in the management plan review. These include:

- Improve resource management consistency and efficiency
- Expand coordination and communication between sites and to the public
- Evaluate emergency response capabilities in the region, and clarify and coordinate the sanctuary's role in relation to other agencies
- Develop a mechanism to address current and emerging issues between the sites
- Coordinate research/monitoring, education/outreach, and enforcement activities

## **ADDRESSING THE ISSUE**

Each of the three sanctuaries developed site-specific administration and operations action plans to address staffing and infrastructure needs in order to implement their new management plans. In contrast, this cross-cutting administration and operations plan targets some initial activities that will be implemented by all three sites in order to improve communication and maximize their ability to collaborate and cooperate on many important resource management and program areas.

### **STRATEGY XAO-1: *Improve Internal Communications Among the Three Sanctuaries.***

Successful collaboration and coordination among sanctuaries is related to the amount and intensity of communication. Though individual sanctuary staff may occasionally communicate by e-mail, telephone or meetings, there is no established mechanism to bring together the

superintendents or staff to proactively discuss issues that may affect multiple sites. This strategy focuses on improving communications between the sites to ensure there are regular opportunities for the managers, staff and the advisory councils to learn what is happening at each of the three sites and jointly plan regional programs and activities.

**Activity 1.1** Improve communications between the sanctuary superintendents.

Superintendents will engage in more informal (random pick-up-the-phone) and formal (regularly scheduled calls or meetings) communications. They will meet at least three times a year as part of the newly established NMSP regional leadership team to (1) improve communication, (2) conduct Annual Operating Plan (AOP) planning, and/or (3) assess the implementation of AOPs and the JMPR action plans.

**Products:** List of cross-cutting AOP activities and an assessment of AOP/action plan implementation

**Partners:** Superintendents for Cordell Bank National Marine Sanctuary (CBNMS), Gulf of the Farallones National Marine Sanctuary (GFNMS), and the Monterey Bay National Marine Sanctuary (MBNMS)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 1.2** Sanctuary superintendents will plan and schedule one regional sanctuary update and team building activity per year.

**Products:** Annual team building/coordination meeting to discuss site-specific and cross-cutting projects, staff roles and responsibilities, and identify how staff can help support and complement the other sites' programs and staff.

**Partners:** CBNMS, GFNMS, MBNMS

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 1.3** Create a new employee orientation program that includes information from the three sanctuaries and the NMSP.

The orientation program should include travel to the other sites to meet staff and learn about their programs and activities. These efforts should be coordinated with similar efforts at headquarters.

**Products:** Employee orientation program that includes a reference binder with information from the other sites and headquarters, publications lists, staff bios.

**Partners:** MBNMS, CBNMS, GFNMS and NMSP staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	AD-2.1
	GFNMS	AD-2

**Activity 1.4** The program coordinators will meet separately at least once per year to share information and plan joint activities prior to the development of the annual operating plans.

**Products:** Site program coordinators (conservation science, education, resource protection) will develop a list of joint or collaborative activities to include in their respective AOPs.

**Partners:** Program coordinators (conservation science, education, resource protection at CBNMS, GFNMS, MBNMS)

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	None	None

**Activity 1.5** Schedule one joint advisory council chair – sanctuary superintendent meeting to determine whether all three advisory councils should meet annually.

The MBNMS and GFNMS advisory councils currently meet on an annual basis to discuss issues and program activities in the northern management area. This meeting among the advisory council chairs and managers would determine the need for expanding this meeting to include all three sites.

**Products:** Initial joint advisory council chair meeting, possible future annual joint meetings.

**Partners:** CBNMS, GFNMS, MBNMS Advisory Council Chairs and Superintendents

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GFNMS	AD-4

**Activity 1.6** Encourage and provide opportunities for site staff to give presentations at each other's SAC Meetings.

**Products:** Briefings at advisory council meetings.

**Partners:** CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	PC-2
	GFNMS	AD-4

**STRATEGY XAO-2: *Improve the Efficiency and Cost-Effectiveness of Program Operations.***

Each of the three sanctuaries have been designated for over ten years and during this time have accumulated an inventory of equipment, vessels and resources to support their own research/monitoring, education/outreach, and resource protection programs. This strategy recognizes there are instances in which it is more cost-effective to share resources among the sites and some instances when it may be more appropriate for each site to have their own. The sites must first inventory their existing resources and then jointly develop a needs assessment to document what is required to implement the three management plans. This strategy also calls for the sites to coordinate and provide opportunities to conduct joint field operations and to conduct an assessment in order to better cooperate and share facilities, signage and exhibits.

**Activity 2.1** Develop a list of existing facilities, exhibits, equipment, vessels and resources based on the revised management plans that could be shared between sites.

**Products:** List of existing equipment, vessels and resources.

**Partners:** NMSP, CBNMS, GFNMS, and MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	AD-1

**Activity 2.2** Develop a list of needed facilities, exhibits, equipment, vessels and resources based on the revised management plans that could be shared between sites.

**Products:** List of needed equipment, vessels and resources.

**Partners:** NMSP, CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	AD-1
	GFNMS	AD-1

**Activity 2.3** Contact and inform the other sites early in the planning stages of field operations to provide opportunities to plan joint missions and to share information and data.

**Products:** List of planned field operations. Shared data and reports.

**Partners:** CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	CS-9
	GFNMS	WQ-8, WD-1, IS-1, FA-1

**STRATEGY XAO-3: *Improve the Efficiency and Cost-Effectiveness of Program Administration.***

Currently each sanctuary office is responsible for managing its own administration and information technology functions, including contracts, procurements, time and attendance, travel orders and vouchers, websites, databases, and geographic information systems. Each site employs a varying number of staff or contractors to perform some or all of these tasks. The goal of this strategy is to evaluate the staffing plans at the sites and maximize opportunities to share personnel and implement methods to make routine administrative functions more efficient. The strategy also highlights the importance of building upon existing efforts to share information technology resources.

**Activity 3.1** Review the staffing plans at each sanctuary to determine if collaborations are possible to create efficiencies, fill gaps, share staff resources and complete specific projects.

This review will explore ways to overcome barriers for both contractors and full-time employees to participate.

**Products:** List of opportunities for collaborations between sites.

**Partners:** Managers for CBNMS, GFNMS, and MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>CBNMS</b>	<b>AD-2</b>
	<b>GFNMS</b>	<b>AD-2</b>
	<b>MBNMS</b>	<b>OA-1</b>

**Activity 3.2** Based on the review in 3.1, and as opportunities arise, create short-term opportunities for staff exchanges, rotations, details and informal staff loans for specific projects or to fulfill on-going needs across all three sites.

**Products:** Update list of opportunities. Provide administrative, contract and/or financial options that facilitate such collaborations.

**Partners:** Managers for CBNMS, GFNMS, MBNMS, and NMSP

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GFNMS</b>	<b>AD-2</b>

**Activity 3.3** Participate in each other's interview panels to review candidates for new and vacant positions, where possible.

**Products:** Recommendations on new hires.

**Partners:** CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	AD-2
	GFNMS	AD-2

**STRATEGY XAO-4: *Improve the Coordination of Sanctuary Resource Protection Activities and Programs.***

Each of the three site-specific management plans proposes various strategies to address their own resource protection programs (i.e., regulations/permitting, emerging issues, enforcement, emergency response). This strategy is aimed at improving the communication and coordination of resource protection activities across the three sites. The strategy addresses the need to improve internal understanding and awareness of regulatory and permit processes and activities. Secondly, it establishes a process to identify and, when appropriate, jointly address emerging issues in a regional capacity. Third, it recommends the development of a regional sanctuary emergency response plan so that the NMSP is better prepared to address emergencies on a regional scale. Finally, it identifies the need to comprehensively evaluate enforcement needs in relation to the new management plans and develop and implement a regional enforcement plan.

**Activity 4.1** Improve staff awareness and understanding of each site's regulations.

Establish a basic and consistent understanding of each site's regulations and ensure that everyone knows where to direct questions relating to specific regulations and permits.

**Products:** Fact sheet summarizing each site's regulatory and permit authority, and identifies the appropriate person to contact at each site.

**Partners:** NMSP, CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	CBNMS	AD-9
	GFNMS	RP-4
	MBNMS	OA-8 and OA-9

**Activity 4.2** Improve staff awareness and understanding of each site's permits.

Inform the other sites of any new permit applications or other activities that could affect any of the sanctuaries.

**Products:** Share existing permit reports and explore whether a new reporting system is needed to improve coordination.

**Partners:** NMSP, CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>CBNMS</b>	<b>AD-9</b>
	<b>GFNMS</b>	<b>RP-5</b>
	<b>MBNMS</b>	<b>OA-8</b>

**Activity 4.3** Coordinate emerging issues among the three sites.

As the sites identify emerging issues, determine the significance and potential to impact another site, and communicate this to the potentially affected site(s).

**Products:** Analysis of emerging issue(s).

**Partners:** NMSP, CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>CBNMS</b>	<b>AD-10</b>
	<b>GFNMS</b>	<b>RP-1, RP-2, RP-3</b>
	<b>MBNMS</b>	<b>EI-1, EI-2</b>

**Activity 4.4** Develop coordinated strategies to address emerging issues.

Jointly determine if a new or emerging issue needs action and identify a strategy and activities to address the issue, depending on whether it is an immediate or long-term threat, what is (or is not) known about it, and if there are adequate resources to address it properly.

**Products:** Recommendation for action, including next steps.

**Partners:** NMSP, CBNMS, GFNMS, MBNMS

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>CBNMS</b>	<b>AD-10</b>
	<b>GFNMS</b>	<b>RP-1, RP-2, RP-3</b>
	<b>MBNMS</b>	<b>EI-1, EI-2</b>

**Activity 4.5** Develop a coordinated sanctuary emergency response plan.

Develop a coordinated sanctuary emergency plan describing how the three sanctuaries will internally coordinate and respond to emergencies including: oil spills, hazardous material spills, vessel groundings, plane crashes, and natural disasters. The plan should address broad emergency response issues that affect the region, identify NMSP staffing responsibilities and expertise, and outline how the NMSP will coordinate with existing federal, state and local emergency response agencies in California. The plan will be developed to utilize the existing Incident Command System (ICS), the U.S. Coast Guard (USCG) Area Contingency Plan (ACP).

**Products:** Regional Sanctuary Emergency Response Plan.

***Administration and Operations Action Plan***  
***GFNMS Draft Management Plan***

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**Partners:** NMSP, CBNMS, GFNMS, MBNMS

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CBNMS</b>	<b>AD-7</b>
	<b>GFNMS</b>	<b>RP-7, RP-8</b>
	<b>MBNMS</b>	<b>OA-4</b>

**Activity 4.6** Coordinate with the NMSP Damage Assessment Team on populating and making the Sanctuary Hazardous Incident Emergency Logistics Database System (SHIELDS) functional and operative for the three sanctuaries and integrating it with the existing Sanctuary Integrated Monitoring Network (SIMoN) database.

**Products:** SHIELDS for CBNMS, GFNMS and MBNMS.

**Partners:** NMSP, CBNMS, GFNMS, MBNMS and the NOAA Hazardous Materials (HAZMAT)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CBNMS</b>	<b>AD-7</b>
	<b>GFNMS</b>	<b>RP-7</b>
	<b>MBNMS</b>	<b>OA-4</b>

**Activity 4.7** Develop a comprehensive enforcement plan for the tri-sanctuary area.

This plan will evaluate enforcement needs to implement this management plan and integrate existing formal and informal enforcement networks across this region. The plan should also include a consistent enforcement penalty schedule and an internal communication strategy.

**Products:** Coordinated enforcement plan for the three-sanctuary area.

**Partners:** CBNMS, GFNMS, MBNMS, General Council Ocean Service (GCOS), General Council Enforcement Litigation (GCE), NOAA-Office of Law Enforcement (OLE), the United States Coast Guard (USCG), National Park Service (NPS), California Parks, CDFG, County Sheriff Departments

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CBNMS</b>	<b>AD-6</b>
	<b>GFNMS</b>	<b>RP-6</b>

**Activity 4.8** Implement a comprehensive enforcement plan for the tri-sanctuary area.

**Products:** Enforcement activities that implement the comprehensive enforcement plan, including appropriate development of field officers, improved investigation and follow-up actions, and cooperative enforcement agreements with federal, state and local partners.

**Partners:** NMSP, CBNMS, GFNMS, MBNMS

Cross- Reference:	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
	<b>CBNMS</b>	<b>AD-6</b>
	<b>GFNMS</b>	<b>RP-6</b>

**TABLE XAO-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING ADMINISTRATION & OPERATIONS ACTION PLAN**

<b>Desired Outcome(s) For This Action Plan:</b>	
<b>Improved communication and coordination among Sanctuary staff resulting in more integrated and coordinated resource protection for Sanctuary resources.</b>	
<b>Performance Measures</b>	<b>Explanation</b>
<b>Increase the number of cross-cutting AOP activities that each site includes in their site-specific AOP by 10% each year.</b>	One of the primary purposes of this action plan is to increase the amount of communication and interaction among the three sites. This action plan identifies specific opportunities for staff to interact, resulting in more coordinated planning and implementation of joint activities that address priority issues. The tangible results of these interactions will be formulated within each site's AOP.

**TABLE XAO-2: CROSS-CUTTING ADMINISTRATION & OPERATIONS ACTION PLAN TIMELINE**

<b>ADMINISTRATION &amp; OPERATIONS ACTION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Strategy XAO-1: Improve Internal Communications Among the Three Sanctuaries					
Activity 1.1: Improve communications between the Sanctuary Managers & Superintendents.	→				→
Activity 1.2: Sanctuary Managers/Superintendents will plan and schedule one regional Sanctuary update and team building activity per year.	→				→
Activity 1.3: Create a new employee orientation program that includes information from the three sanctuaries and the NMSP	→				→
Activity 1.4: The program coordinators will meet separately at least once per year to share information and plan joint activities prior to the development of the annual operating plans.	→				→
Activity 1.5: Schedule one joint Advisory Council Chair – Sanctuary Manager meeting to determine whether all three advisory councils should meet annually.		.....			→
Activity 1.6: Encourage and provide opportunities for site staff to give presentations at each other's sanctuary advisory council meetings.	→				→
Strategy XAO-2: Improve the Efficiency and Cost-Effectiveness of Program Operations					
Activity 2.1: Develop a list of existing facilities, signage, exhibits, equipment, vessels and resources based on the revised management plans that could be shared between sites.		→			

<b>ADMINISTRATION &amp; OPERATIONS ACTION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Activity 2.2: Develop a list of needed facilities, signage, exhibits, equipment, vessels and resources based on the revised management plans that could be shared between sites.</b>		→			
<b>Activity 2.3: Contact and inform the other sites early in the planning stages of field operations to provide opportunities to plan joint missions and to share information and data.</b>	→	→	→	→	→
Strategy XAO-3: Improve the Efficiency and Cost-Effectiveness of Program Administration					
<b>Activity 3.1: Review the staffing plans at each Sanctuary to determine if collaborations are possible to create efficiencies, fill gaps, share staff resources and complete specific projects.</b>	→				
<b>Activity 3.2: Based on the review in 3.1, and as opportunities arise, create short-term opportunities for staff exchanges, rotations, details and informal staff loans for specific projects or to fulfill on-going needs across all three sites.</b>		.....→			
<b>Activity 3.3: Participate in each other's interview panels to review candidates for new and vacant positions, where possible.</b>	→	→	→	→	→
Strategy XAO-4: Improve the Coordination of Sanctuary Resource Protection Activities and Programs					
<b>Activity 4.1: Improve staff awareness and understanding of each site's regulations.</b>	→	→	→	→	→
<b>Activity 4.2: Improve staff awareness and understanding of each site's permits.</b>	→	→	→	→	→
<b>Activity 4.3: Coordinate emerging issues among the three sites.</b>	→	→	→	→	→
<b>Activity 4.4: Develop coordinated strategies to address emerging issues.</b>	→	→	→	→	→
<b>Activity 4.5: Develop a coordinated Sanctuary emergency response plan.</b>		→	→		
<b>Activity 4.6: Coordinate with the NMSP Damage Assessment Team on populating and making the Sanctuary Hazardous Incident Emergency Logistics Database System (SHIELDS) functional and operative for the three sanctuaries and integrating it with the existing Sanctuary Integrated Monitoring Network (SIMoN) database.</b>		→	→		
<b>Activity 4.7: Develop a comprehensive enforcement plan for the three-sanctuary area.</b>	→				
<b>Activity 4.8: Implement a comprehensive enforcement plan for the three-sanctuary area.</b>		→	→	→	→

**Legend:**



Planned Activity



Proposed Activity, based on internal assessment

**TABLE XAO-3: ESTIMATED COSTS TO IMPLEMENT THE CROSS-CUTTING ADMINISTRATION & OPERATIONS ACTION PLAN**

Strategy	Estimated Annual Cost (1000's)*					Total Est. 5-Year Cost (1000's)
	YR 1	YR 2	YR 3	YR 4	YR 5	
Strategy XAO-1: Improve Internal Communications Among the Three Sanctuaries	\$54.00	\$54.00	\$54.00	\$54.00	\$54.00	\$270.00
Strategy XAO-2: Improve the Efficiency and Cost-Effectiveness of Program Operations	\$36.00	\$36.00	\$36.00	\$36.00	\$36.00	\$180.00
Strategy XAO-3: Improve the Efficiency and Cost-Effectiveness of Program Administration	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$60.00
Strategy XAO-4: Improve Coordination of Sanctuary Resource Protection Activities and Programs	\$186.00	\$174.00	\$162.00	\$162.00	\$162.00	\$846.00
<b>Total Estimated Annual Cost</b>	<b>\$288.00</b>	<b>\$276.00</b>	<b>\$264.00</b>	<b>\$264.00</b>	<b>\$264.00</b>	<b>\$1,356.00</b>
* Cost estimates are for both “programmatic” and “base” (salaries and overhead) expenses.						
** Contributions from outside funding sources also anticipated.						
For management planning purposes, the individual site cost to implement cross-cutting strategies can be calculated by dividing the estimated annual cost by three (equal cost). The actual cost to each site may vary according to strategy but will be further refined when sites prepare annual operating plans.						



## **COMMUNITY OUTREACH ACTION PLAN**

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### **GOAL**

A coordinated, collaborative regional community outreach strategy will build awareness throughout north-central California and beyond about (1) the existence and purpose of the three sanctuaries and the national program; (2) the diverse natural resources and ecosystems of each sanctuary and why they need protection; (3) why their existence is relevant to people; (4) the economic and intrinsic value of the three sanctuaries to coastal and inland communities beyond such direct industries as fishing and ecotourism; (5) how these three sanctuaries are working with constituent groups; and (6) how individuals and groups can be engaged in helping the sanctuaries accomplish their resource protection, research, and education goals.

### **ISSUE DESCRIPTION**

Under the National Marine Sanctuary Program (NMSP), each sanctuary in the system conducts education and outreach activities to build broad public awareness about the existence and purpose of our nation's marine sanctuaries. The NMSP recognizes a well-informed local, regional, and national constituency greatly enhances the ability of the sanctuaries to protect their natural and cultural resources. Therefore, outreach activities should provide local and state governments, businesses, non-governmental organizations, constituent groups, and the general public with the information necessary to be effective partners in the stewardship of sanctuary resources.

Because of limited resources generally, each site has primarily focused on a select number of audiences within a limited geographic area. As a result, there are several areas where a broad-based public understanding needs to be enhanced. For example, there appears to be a lack of understanding about:

- The unique situation of having three sanctuaries contiguously located in north-central California,
- How these three sanctuaries together can work with other organizations to enhance regional outreach efforts regarding marine ecosystems,
- How individuals and groups can engage effectively with the sanctuary program and best protect sanctuary resources, and
- How businesses, constituent groups, agencies, elected officials and others can provide informed input into decisions regarding sanctuary management and further enhance community awareness of the sanctuaries.

This action plan identifies appropriate regional audiences and topics, regional outreach strategies, and marketing and media exposure efforts that effectively highlight specific program activities across all three sites as well as the national system. It is also designed to complement each site-specific program and to be flexible enough to incorporate new strategies and topics over time.

Effective community outreach is accomplished through a continuous cycle of ocean and coastal outreach, education, and stewardship. Community outreach expands awareness, knowledge and ultimately changes attitudes and behaviors. By providing information on ocean and coastal resources, and providing stewardship opportunities for people to get involved in the sanctuary, people will begin to have a personal relationship with the sanctuary and may be more likely to become ambassadors helping to protect sanctuary resources. Community outreach involves three strategies tailored to the specific needs and interests of a given audience and may be delivered by members of that audience.

- Outreach provides audiences with sanctuary-related information and materials promoting ocean and coastal stewardship.
- Education provides fundamental scientific understanding, knowledge, training, or professional development on topics relevant to the world's atmosphere, climate, oceans and coastal ecosystems, and resource protection.
- Stewardship is a personal sense of responsibility to take informed action and make caring choices, at home or work, which promote and protect the health of our coasts and oceans.

**STRATEGY XCO-1: *Build Upon and Expand Existing Ocean and Coastal Outreach***

This strategy is aimed at raising general awareness of marine ecosystems, individual sanctuaries and the sanctuary program, and inspiring stewardship of ocean and coastal resources. Outreach provides audiences with sanctuary-related information and materials based on National Oceanic and Atmospheric Administration (NOAA) science, products, and services that promote ocean and coastal stewardship. These audiences may be: north-central California coastal residents; people who live and work in inland California communities that regularly visit the ocean, such as divers, kayakers, tidepoolers, etc.; those who make their living within the ocean environment, like fishermen, maritime shipping companies, etc.; or people who live outside California that care about the ocean even though they may never visit. These, and others, are important voices in the protection and stewardship of the oceans. Key target audiences and messages should also be closely coordinated with outreach needs identified in the issue-related action plans.

**Activity 1.1** Develop or strengthen coordinated outreach programs and opportunities, such as public service announcements, issue-specific workshops and brochures (e.g., tide pool etiquette), docent programs, signage, learning centers, or exhibits and displays at community events.

**Products:** Priority list of outreach activities based on the priority issues identified in the management plans. Some of these activities include joint outreach programs, volunteer opportunities, website development, signage and interpretive exhibits.

**Partners:** Advisory council members from all three sanctuaries/working groups, Farallones Marine Sanctuary Association (FMSA), Monterey Bay Sanctuary Foundation,

National Marine Sanctuary Foundation, Channel Islands National Marine Sanctuary (CINMS), Channel Islands Sanctuary Foundation/Association, NOAA Enforcement

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>ED-4, ED-5</b>
	<b>GF</b>	<b>ED-8, ED-9, ED-10, ED-11, ED-12</b>

**Activity 1.2** Plan and conduct regional sanctuary outreach events to promote the importance of monitoring, disseminate monitoring data, and improve understanding of marine conservation and management.

**Products:** Outreach and education materials/curricula to promote awareness of monitoring activities and disseminate monitoring data.

**Partners:** Cordell Bank National Marine Sanctuary (CBNMS), Gulf of the Farallones National Marine Sanctuary (GFNMS), Monterey Bay National Marine Sanctuary (MBNMS), Sanctuary Integrated Monitoring Program (SIMoN), Community Outreach Working Group, Snapshot Day Water Quality Monitoring Event, Long-term Monitoring Program and Experiential Training for Students (LiMPETS), Beach Watch, Beach Coastal Ocean Mammal/Bird Educational and Research Survey (Beach COMBERS), Farallones Marine Sanctuary Association (FMSA), Global Learning and Observation to Benefit the Environment (GLOBE), JASON Foundation for Education (JASON)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>ED-1</b>
	<b>GF</b>	<b>CS-3</b>

**Activity 1.3** Develop and implement joint media communications plan, e.g., print, radio, TV, Internet.

**Products:** Joint media communications plan, including site points of contact, and key messages from the management plans.

**Partners:** Traditional and electronic media, both coastal and inland, including local weekly papers, community access TV stations

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>ED-3</b>
	<b>GF</b>	<b>ED-11</b>

**Activity 1.4** Identify and partner with external programs to incorporate sanctuary-related messages.

**Products:** External partners' outreach plan, including priority partners, key messages based on priority issues identified in the management plans, outreach materials.

**Partners:** United States Coast Guard (USCG), National Park Service (NPS), Environmental Protection Agency (EPA), other federal agencies, California State Parks, other state agencies, cities, local parks/recreation departments, pollution prevention programs, chambers of commerce, trade associations for shipping, fishing, tourism, etc., dive clubs/shops, kayak clubs/shops, spot abalone divers, other recreational groups, natural history museums, institutions with community service requirements/marine sciences (high schools, colleges)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>ED-10, ED-11</b>

**STRATEGY XCO-2: *Enhance and Coordinate Ocean and Coastal Education***

This strategy focuses on building community knowledge and fostering caring actions and attitudes targeting priority issues identified in the management plans. The NMSP's joint ocean and coastal education efforts provide a fundamental scientific understanding, knowledge, training, or professional development to a particular audience on topics identified as important to protect sanctuary resources. There are many possible audiences such as students, teachers, state and local agencies, community leaders, and the general public. Sanctuary-related educational activities are based on NOAA science, systematic in design with clear goals, objectives and measurable outcomes; aligned, where appropriate, with state or national education standards; and designed to facilitate evaluation by a third party.

**Activity 2.1** Collaborate on existing site-specific education programs and products as a means to enhance and expand educational offerings.

Each year, the education staff will jointly meet to identify collaborative projects for inclusion in their respective annual operating plans (AOPs).

**Products:** Joint education implementation strategy based on priority education issues identified in the management plans, incorporating priority list of educational programs and materials needed, potential lecture/symposia themes. Joint online teachers' database.

**Partners:** West Coast Education Liaison, state/local volunteer programs, Bay Area Sea Kayakers (BASK), high school/college classes doing coastal monitoring, National Science Foundation, other federal agencies (especially for funding), local non-governmental organizations (NGO's)/non-profits, Association of Monterey Bay Area Governments, Association of (SF) Bay Area Governments

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>ED-4, ED-6, ED-7, ED-8</b>
	<b>GF</b>	<b>ED-2, ED-3, ED-4</b>

**Activity 2.2** Following expansion of the Multicultural Education for Resource Issues Threatening Oceans (MERITO) program, increase multicultural/multilingual efforts based on

needs assessments to determine other multicultural, socioeconomic, or multilingual communities (Vietnamese, Chinese, Portuguese, Italian, etc.) and their interests.

**Products:** Needs assessments of various multicultural, socioeconomic, and multilingual communities and possible expansion of education efforts.

**Partners:** Multicultural community leaders, bilingual school programs, local NGO's/non-profits

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>CB</b>	<b>CO-10</b>

**Activity 2.3** Identify and implement new education programs that can be developed jointly.

**Products:** Teacher workshops, Volunteer Naturalist Corps program, certification training program for professional naturalists, similar to SBNMS (Stellwagen Bank), natural history guides.

**Partners:** Other national marine sanctuaries (esp. Channel Islands, Olympic Coast and Stellwagen Bank), Elkhorn Slough National Estuarine Research Reserve, state/local volunteer naturalist programs, Marine Advanced Technology Education (MATE), Monterey Bay Aquarium Research Institute (MBARI), Moss Landing Marine Lab (MLML), universities, and Sea Grant institutions, Eco-tourism businesses such as dive and kayak shops, whale-watching companies, local non-governmental organizations/non-profits

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>CB</b>	<b>ED-6, ED-7</b>
	<b>GF</b>	<b>ED-2, ED-7</b>

### **STRATEGY XCO-3: *Enhance Ocean and Coastal Stewardship***

Marine sanctuary stewardship is a personal sense of responsibility to take informed action and make caring choices, at home or work, which promote and protect the health of our coasts and oceans. A steward develops attitudes, motivations, and commitments that are reflected in informed decisions and responsible actions. Stewards can be individuals, members of groups, or entities that influence others' opinions and actions about the oceans. Stewardship can be demonstrated through a variety of means, including:

- Volunteer for an organized stewardship program,
- Take personal action to protect our ocean sanctuaries,
- Provide informed public input into decisions regarding the sanctuaries, and
- Inform others regarding marine ecosystems and the sanctuary program.

Similar to the audiences for outreach, ocean and coastal stewards may be north-central California coastal residents, people who live and work in inland California communities that regularly visit

the ocean, those who make their living within the ocean environment, or people who care about the ocean even though they may never visit.

**Activity 3.1** Create, maintain and promote sanctuary and partner volunteer programs to provide opportunities for stewardship as well as expanding resource protection, education, and outreach capabilities of the three sanctuaries.

**Products:** Expanded volunteer programs, volunteer opportunities, and trainings.

**Partners:** NOAA’s Team Ocean Conservation Education Action Network (OCEAN), Elkhorn Slough National Estuarine Research Reserve, Farallones Marine Sanctuary Association (FMSA), Monterey Bay Sanctuary Foundation, Bay Net, Save Our Shores, other NGOs, California State Parks, other state/local resource agencies, Friends of Fitzgerald Marine Reserve, high school service learning programs

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>ED-2</b>

**Activity 3.2** Create new ways to inspire coastal and ocean stewardship in local communities.

The three sites will conduct needs assessments with targeted constituents and audiences to identify innovative and creative methods of engaging people in sanctuary activities. Some examples include working with faith-based or cultural organizations, retired citizens or local art groups.

**Products:** Pilot program or campaign to incorporate non-traditional stewardship activities and partners.

**Partners:** Faith-based groups, Multicultural groups, bilingual school programs, after school programs, art, dance and music programs, service organizations

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>ED-10</b>
	<b>GF</b>	<b>ED-5, ED-6, ED-8</b>

**Activity 3.3** Identify partners to incorporate stewardship messages.

**Products:** Collaborative stewardship campaign.

**Partners:** United States Coast Guard (USCG), National Parks Service (NPS), other federal agencies, California State Parks, other state agencies, cities, local parks/recreation departments, local agencies mandated to have pollution prevention programs (water pollution control, solid waste control), County Sheriffs’ departments, city police, chambers of commerce, trade associations for shipping, fishing, tourism, etc., dive clubs, kayak clubs, other recreational groups, natural history museums, institutions that have community service requirements (high schools, colleges), service organizations

***Community Outreach Action Plan***  
***GFNMS Draft Management Plan***

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	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**TABLE XCO-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING COMMUNITY OUTREACH ACTION PLAN**

<b>Desired Outcome(s) For This Action Plan:</b>	
<b>Expand joint education and outreach efforts in a manner enhancing protection for Sanctuary resources and the delivery of programs and services to local communities.</b>	
<b>Performance Measures</b>	<b>Explanation</b>
<b>Increase the number of joint education and outreach efforts directed at communities from 1,000 individuals in Year 1 to 5,000 individuals in Year 5.</b>	One of the main purposes of this action plan is to expand general awareness of the three sanctuaries, develop joint education products addressing priority issues, and increase involvement of individuals in the stewardship of the resources in the three sanctuaries. Some of the programs directed at local communities include schools and teachers, volunteers, fairs and festivals, visitor centers, public lecture series, etc.

**TABLE XCO-2: CROSS-CUTTING COMMUNITY OUTREACH ACTION PLAN TIMELINE**

<b>COMMUNITY OUTREACH PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Cross-cutting Outreach</b>					
<b>Strategy XCO-1: Build Upon and Expand Existing Ocean and Coastal Outreach</b>					
<b>Activity 1.1: Develop or strengthen coordinated outreach programs and opportunities, such as public service announcements, issue-specific workshops and brochures (e.g., tidepool etiquette), docent programs, signage, learning centers, or exhibits and displays at community events.</b>	.....	—————	—————	—————	—————▶
<b>Activity 1.2: Plan and conduct regional Sanctuary outreach events to promote the importance of monitoring, disseminate monitoring data, and improve understanding of marine conservation and management.</b>	.....	—————	—————	—————	—————▶
<b>Activity 1.3: Develop and implement joint media communications plan (print, radio, TV, Internet, etc.).</b>		—————	—————	—————	—————▶
<b>Activity 1.4: Identify and partner with external programs to incorporate Sanctuary-related messages.</b>	—————	—————	—————	—————	—————▶
<b>Cross-cutting Education</b>					
<b>Strategy XCO-2: Enhance and Coordinate Ocean and Coastal Education</b>					
<b>Activity 2.1: Collaborate on existing site-specific education programs and products as a means to enhance and expand educational offerings.</b>	.....	—————	—————	—————	—————▶
<b>Activity 2.2: Increase multicultural/multilingual efforts based on</b>			—————	—————	—————▶

**Community Outreach Action Plan**  
**GFNMS Draft Management Plan**

COMMUNITY OUTREACH PLAN	Year 1	Year 2	Year 3	Year 4	Year 5
needs assessments to determine other multicultural, socioeconomic, or multilingual communities (Vietnamese, Chinese, Portuguese, Italian, etc.) and their interests.					
Activity 2.3: Identify and implement new education programs that can be developed jointly.	.....	—————	—————	—————	—————▶
Cross-cutting Stewardship					
Strategy XCO-3: Enhance Ocean and Coastal Stewardship					
Activity 3.1: Create, maintain, and promote sanctuary and partner volunteer programs to provide opportunities for stewardship as well as expanding resource protection, education, and outreach capabilities of the three sanctuaries.	—————	—————	—————	—————	—————▶
Activity 3.2: Create new ways to inspire coastal and ocean stewardship in local communities.			—————	—————	—————▶
Activity 3.3: Identify partners to incorporate stewardship messages.	—————	—————	—————	—————	—————▶

**Legend:**

—————▶	Planned Activity
.....▶	Proposed Activity, based on internal assessment

**TABLE XCO-3: ESTIMATED COSTS TO IMPLEMENT THE CROSS-CUTTING COMMUNITY OUTREACH ACTION PLAN**

Strategy	Estimated Annual Cost (1000's)*					Total Est. 5-Year Cost (1000's)
	YR 1	YR 2	YR 3	YR 4	YR 5	
Strategy XCO-1: Build Upon and Expand Existing Ocean and Coastal Outreach	\$34.50	\$46.50	\$46.50	\$46.50	\$58.50	\$232.50
Strategy XCO-2: Enhance and Coordinate Ocean and Coastal Education	\$57.00	\$69.00	\$69.00	\$69.00	\$81.00	\$345.00
Strategy XCO-3: Enhance Ocean and Coastal Stewardship	\$52.50	\$64.50	\$64.50	\$64.50	\$76.50	\$322.50
<b>Total Estimated Annual Cost</b>	<b>\$144.00</b>	<b>\$180.00</b>	<b>\$180.00</b>	<b>\$180.00</b>	<b>\$216.00</b>	<b>\$900.00</b>
* Cost estimates are for both “programmatic” and “base” (salaries and overhead) expenses.						
** Contributions from outside funding sources also anticipated.						
For management planning purposes, the individual site cost to implement cross-cutting strategies can be calculated by dividing the estimated annual cost by three (equal cost). The actual cost to each site may vary according to strategy but will be further refined when sites prepare annual operating plans.						





# ECOSYSTEM MONITORING ACTION PLAN

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## GOALS

The goals of ecosystem monitoring for the northern-central California sanctuaries are to (1) determine the current and anticipate the future status of sanctuary resources; (2) understand the limits of variation in resources; (3) detect temporal and spatial changes in resources; (4) identify potential agents of change; and (5) provide scientific information that can guide management decisions on priority issues.

## INTRODUCTION

The legislation establishing the National Marine Sanctuary Program requires that long-term monitoring of sanctuary resources be supported, promoted, and coordinated (16 U.S.C. 1431). Sanctuaries also promote data collection to assess resource or environmental change with respect to implemented management actions. The suite of monitoring information required by sanctuary management includes data from within the sanctuary and from areas outside the boundaries that influence sanctuary waters.

For the most part, individual sanctuaries work independently to develop monitoring programs and partnerships to inform their management concerns. These programs typically rely on substantial support from other government, private, and academic institutions at the federal, state, and local levels. The program designs are often only indirectly influenced by sanctuary management responsibilities.

Undertaking ecosystem monitoring requires long-term comprehensive assessments and broad scale integration of data collected in a wide variety of habitats (e.g., coastal interface, subtidal, continental shelf, shelf break, and deep water) and in areas that directly influence them (e.g., watershed, estuaries, coastal currents). Such assessments and integration can only be achieved through coordination with multiple partners focused on a variety of resources and geographic scales. Because the three sanctuaries of Cordell Bank, Gulf of the Farallones, and Monterey Bay have contiguous boundaries, they protect and manage many of the same habitats types and living resources, some of which range throughout the combined area. As such, the sanctuaries should consider each other as primary partners in monitoring efforts to evaluate the status and trends of these shared resources. Coordination among the three sanctuaries to promote, conduct, integrate, and synthesize data from ecosystem monitoring activities is the most effective and efficient means to improve availability of information for resource conservation and management across the region.

The combined areas of the Cordell Bank National Marine Sanctuary (CBNMS), Gulf of the Farallones National Marine Sanctuary (GFNMS) and Monterey Bay National Marine Sanctuary (MBNMS) also represent a substantial portion of California coastal waters. Regional sanctuary monitoring coordination across this extensive area will help promote sanctuary management concerns as a driver for large-scale monitoring initiatives and partnerships. The data collected from coordinated efforts will be useful at the local and regional scale, with the potential for influencing resource management actions throughout a substantial portion of the West Coast.

## **ADDRESSING THE ISSUE**

With the exception of Cordell Bank, most of the monitoring data that informs sanctuary management are not financed, collected, or analyzed by the sanctuaries. Instead, sanctuaries support and promote these activities indirectly by providing vessel time, staff support, and equipment, and coordinating the interests and information of outside agencies and partners. They also assist to secure outside funding that can be directed toward projects that address sanctuary information needs such as the Sanctuary Integrated Monitoring Network (SIMoN).

Such indirect support is appropriate to the mandate and capacities of the sanctuary program. Sanctuaries do not have the expertise or the personnel resources to collect and analyze the variety of information required for all of their management needs. Such expertise is accessible through partnerships with various research institutions. However, effective resource management requires a holistic view, which sanctuaries are uniquely positioned to achieve. To meet their resource management mandate, sanctuaries must synthesize and integrate information from disparate research and monitoring projects. They have the further responsibility of interpreting and applying available scientific knowledge for resource managers and the public. Thus, coordination of ecosystem monitoring efforts requires strategic action on various sanctuary-specific programmatic levels.

Recommended strategies focus on coordinating existing activities, identifying opportunities for additional coordination, and establishing the administrative infrastructure, advisory panels, and oversight mechanisms required to support, direct, and evaluate coordinated monitoring across the three sanctuaries. Because many of the monitoring requirements common to the three sanctuaries undergoing the Joint Management Plan Review (JMPR) overlap with the interests of Channel Islands National Marine Sanctuary (CINMS) and the Olympic Coast National Marine Sanctuary (OCNMS), the strategies recommended in this proposed action plan should serve as a model for expanded coordination of appropriate monitoring activities across all five of the West Coast sanctuaries. The strategies are also consistent with efforts of the System Wide Monitoring Program (SWiM) to improve collection, evaluation, and interpretation of monitoring information throughout the sanctuaries. Thus, these activities promote system and regional integration across the program as well as improving ecosystem conservation and management in the combined area of the three sanctuaries.

### ***STRATEGY XEM-1: Coordinate Existing Targeted Monitoring Activities to Promote Greater Efficiency and Effectiveness.***

Priority activities for initiation of joint ecosystem monitoring within the region should be focused on the coordination of existing sanctuary-specific monitoring programs that assess

similar ecosystems in at least two of the three sanctuaries. This includes coordinating targeted programs that monitor conditions in the coastal interface and the pelagic/offshore systems.

These priorities are based on the need to establish common ecological monitoring efforts throughout the region and the priority issue areas identified in the management plan review that could best be addressed through a coordinated approach among the sanctuaries. Some of the priority habitats that have been identified for joint monitoring include: rocky intertidal, benthic, and pelagic/open ocean. The coordination channels and activities established to support these targeted efforts could serve as a model for additional monitoring coordination in the future. Other existing or newly emerging monitoring activities, not identified in this action plan, represent potential opportunities for additional coordination. Assessment of such opportunities is addressed in Strategies XEM-2 and XEM-3.

**Activity 1.1** Coordinate individual sanctuary rocky intertidal monitoring programs and investigate opportunities to collaborate with other large-scale rocky intertidal monitoring efforts.

**Products:** Regional sanctuary rocky intertidal monitoring plan.

**Partners:** MBNMS, GFNMS, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Multi-Agency Rocky Intertidal Network (MARINE), National Park Service (NPS), Southern California Coastal Water Research Project Authority (SCCWRP), Bodega Marine Laboratory (BML), Tenera Inc., Minerals Management Service (MMS), Kinetic Labs, Inc.

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>GF</b>	<b>WD-2, IS-3</b>

**Activity 1.2** Conduct a workshop to coordinate data collection protocols for Beach Coastal/Marine Bird Education Research Surveys (Beach COMBERS) and Beach Watch Programs that indirectly assess the health of the pelagic/offshore ecosystem.

**Partners:** CBNMS, GFNMS, MBNMS, SIMoN, NMSP, Coastal Observation and Seabird Survey Team (COASST)

**Products:** Coordination document for joint reporting; volunteer training, coordination, and enrichment opportunities; data collection, management and metadata standards; coordinated revision and reprinting of the field guide; plan for shared study skin collection.

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>GF</b>	<b>CS-1</b>

**Activity 1.3** Develop an integrated sanctuary marine mammal and seabird survey monitoring plan for the three sanctuaries to coordinate and supplement the National Oceanic and Atmospheric Administration (NOAA) Fisheries five-year surveys.

**Products:** Plan to coordinate and supplement ongoing NOAA Fisheries five-year sanctuary marine mammal/seabird monitoring surveys (per recommendations developed during the Marine Mammal/Seabird Workshop in December 2002). Joint ship-time requests or contracts to ensure consistent availability of appropriate survey platforms. Joint NOAA ship McArthur II cruises.

**Partners:** NOAA Fisheries, CBNMS, GFNMS, MBNMS, CINMS, Olympic Coast National Marine Sanctuary (OCNMS), Center for Integrated Marine Technology (CIMT), NPS, Point Reyes Bird Observatory (PRBO), SIMoN

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>CS-7</b>
	<b>GF</b>	<b>FA-1</b>

**Activity 1.4** Explore the potential for the expansion of existing fish surveys, such as the California Cooperative Oceanic Fisheries Investigations (CalCOFI) transect lines through Gulf of the Farallones and Cordell Bank, and continuation in Monterey Bay.

**Products:** Assessment for expansion of CalCOFI transects in Cordell Bank and Gulf of the Farallones.

**Partners:** CBNMS, GFNMS, MBNMS, California Cooperative Oceanic Fisheries Investigations (CalCOFI), Monterey Bay Aquarium Research Institute (MBARI), NOAA Fisheries, Alliance for California Current Ecosystem Observation (ACCEO), NOAA-National Centers for Coastal Ocean Service (NCCOS), SIMoN, University of California-Santa Cruz (UCSC)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>CS-8</b>

**Activity 1.5** Jointly developed research cruise plans and standards for sampling and reporting results for benthic habitat survey work.

**Products:** Research plans such as that developed for the Delta submarine that detail the annual survey work, and a report that summarizes the annual findings and results.

**Partners:** CBNMS, GFNMS, MBNMS, NOAA Fisheries, California Department of Fish and Game (CDFG), U.S. Geological Survey (USGS)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>CS-2, CS-3, CS-4</b>

**Activity 1.6** Augment the benthic habitat survey work with new technologies such as ROV surveys.

**Products:** Additional research cruises that use remotely operated vehicles (ROVs) and other technologies. Cruise reports that summarize the mission's findings and results.

**Partners:** CBNMS, MBNMS, NOAA Fisheries, CDFG, USGS

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>CS-2, CS-3, CS-4</b>

**STRATEGY XEM-2: *Coordinate and Implement Existing Regional Ecosystem Monitoring Activities.***

Over the last decade, many federal and state agencies have actively participated in collaborative efforts to develop and implement integrated coastal and ocean observing and data management systems. To further these efforts, the NMSP, and many individual sanctuaries, has been working closely with its partners to build upon and integrate existing site monitoring programs into regional ecosystem monitoring programs. The following activities have been identified as pilot programs within the NMSP to test the concept of integrating observation data and making it available to resource managers and the public.

**Activity 2.1** Implement the West Coast Observation Project at CBNMS, GFNMS and MBNMS.

The West Coast Observation Project (also known as Sanctuary Ecosystem Assessment Stations) integrates ocean observation data collected at OCNMS, CBNMS, GFNMS, MBNMS, and CINMS. The project will focus on data streams collected at numerous new instrument moorings that will be installed at specific locations within each of the five sanctuaries. Some of these instrument moorings will be maintained and operated by PISCO in the MBNMS and CINMS. The project intends to make the monitoring data accessible via the Internet in an Integrated Ocean Observing System (IOOS) compatible format. The data from this project will be shared with managers and the public through the Sanctuary Integrated Monitoring Network (SIMoN) website.

**Products:** Data buoys deployed, data management system, on-line access to data.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, OCNMS, SIMoN, NMSP, PISCO, NCCOS, NOAA-National Coastal Data Development Center (NCDDC), NOAA-National Oceanographic Data Center (NODC), National Data Buoy Center (NDBC), NOAA National Environmental Satellite Data Information Service (NESDIS), NOAA Fisheries, Central California Ocean Observing System (CenCOOS)

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 2.2** Develop and implement an integrated NMSP's System-Wide Monitoring (SWiM) program for CBNMS, GFNMS and MBNMS.

The primary purpose of the System-Wide Monitoring (SWiM) program is to monitor specific ecological parameters of the sanctuary and ensure the timely flow of data and information to those responsible for managing and protecting resources in the ocean and coastal zone, and to those that use, depend on, and study the ecosystems encompassed by the sanctuaries. It does this by enabling marine sanctuaries to develop effective ecosystem-based monitoring programs that

address management information needs. SWiM provides a design process to decide what parameters to sample and how to sample them in a way that can be applied consistently at multiple spatial scales and to multiple resource types. It also provides a reporting strategy to enable the evaluation of status and trends in protected resources and activities that affect them. Finally, SWiM provides a method to share information for broader issues and scales, and contribute to multi-site, regional and national research and monitoring activities. These efforts will be integrated with SIMoN, which implements the monitoring, coordinates with partners, and provides geographic information systems (GIS), Web and other products that allow for local and regional information sharing.

**Products:** Integrated and tailored SWiM program developed at CBNMS, GFNMS & MBNMS.

**Partners:** CBNMS, GFNMS, MBNMS, SIMoN, NMSP, PISCO, NCCOS, NDBC, NESDIS, NOAA Fisheries, NOAA National Estuarine Research Reserve System (NERRS), U.S. Environmental Protection Agency (EPA), NPS, U.S. Fish and Wildlife Service (USFWS), Mineral Management Service (MMS), USGS, Ocean-US, State of California

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>CS-7, CS-9</b>
	<b>GF</b>	<b>WD-2, IS-3, IS-4, IS-5</b>

**Activity 2.3** Conduct a needs assessment and develop a site implementation plan for expanding the Sanctuary Integrated Monitoring Network (SIMoN) to GFNMS and CBNMS.

As part of the process to establish SIMoN, the MBNMS completed a comprehensive assessment of monitoring activities and priorities. Similar assessments have been conducted for CBNMS and GFNMS as part of the management plan review. Collectively, these assessments have identified priority research and monitoring needs for each site based on the issues addressed in the management plan. Some of the common research and monitoring needs include baseline ecosystem characterization and observation; invasive species; water quality; and assessing the various types of human disturbance and impacts from such activities as sound, light, physical disturbance, and fishing. The next step is to compare the assessments, develop a list of shared priorities and data gaps, integrate the existing information into a common database, and implement joint monitoring activities. SIMoN will be the primary mechanism to coordinate data and information among the sites. This network will be expanded from MBNMS to both CBNMS and GFNMS.

**Products:** CBNMS and GFNMS SIMoN needs assessment and implementation plan(s) that compares research and monitoring needs identified in the management plans.

**Partners:** NMSP, SIMoN, MBNMS, GFNMS, and CBNMS

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 2.4** Explore opportunities to integrate SIMoN with other regional monitoring efforts such as West Coast Observations and other IOOS projects.

**Products:** Updated SIMoN database consistent with IOOS protocols and standards.

**Partners:** NMSP, SIMoN, MBNMS, GFNMS, CBNMS, National Oceanographic Data Center (NODC), Southeast Area Monitoring and Assessment Program (SEAMAP), IOOS

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>CB</b>	<b>CS-7</b>

**Activity 2.5** Evaluate and identify ongoing funding opportunities to support regional and larger scale ongoing monitoring activities.

**Products:** Identification of new partnerships and funding mechanisms to support regional monitoring efforts.

**Partners:** CBNMS, GFNMS, MBNMS, SIMoN, NMSP, NCCOS, NMFS, Farallones Marine Sanctuary Association (FMSA), Monterey Bay Sanctuary Foundation (MBSF)

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>None</b>	<b>None</b>

**STRATEGY XEM-3: *Establish a Joint Internal Monitoring Coordination Team.***

Coordination of monitoring activities among the sanctuaries requires an administrative infrastructure to identify and act on cross-boundary opportunities, collaborate with large-scale initiatives, and interpret the results for resource managers and public audiences across the region.

**Activity 3.1** Establish a monitoring coordination team.

The internal monitoring coordination team could be composed of the entire science staff of the three sanctuaries or, at a minimum, the research coordinators.

**Products:** Integrated Ecosystem Monitoring Team, biannual meetings to develop integrated monitoring plans and proposals, joint reports.

**Partners:** CBNMS, GFNMS, MBNMS, NMSP, SIMoN

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 3.2** Develop a research and monitoring communication plan to improve coordination among the sanctuaries' research staffs and partners.

**Products:** Research a communication plan, sanctuary list serve, and development of joint projects, research plans and proposals.

**Partners:** CBNMS, GFNMS, MBNMS, SIMoN

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 3.3** Evaluate and provide recommendations on the reporting of monitoring activities through periodic “state of the sanctuaries” reports for cross-cutting monitoring activities among the three sanctuaries.

**Products:** State of the sanctuaries report.

**Partners:** SIMoN, SWiM, NMSP, NODC

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 3.4** Develop annual ecosystem-based research and monitoring operating plans in collaboration with each other to meet site, regional, and national monitoring needs.

**Products:** Development and implementation of site-specific monitoring programs for each site that integrate regional ecosystem monitoring requirements and needs.

**Partners:** CBNMS, GFNMS, MBNMS, NMSP, SIMoN

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**STRATEGY XEM-4: *Consider Establishing a Joint Research Activities Panel to Enhance Research and Monitoring Collaborations.***

Research staff and interests at all three sites should discuss the need to establish a formal or informal joint research advisory panel (JRAP) consisting of representatives from the site research activity panels (RAPs) to assist with ongoing coordination of existing activities and identification of emerging opportunities.

**Activity 4.1** Evaluate the need and feasibility of establishing a CBNMS RAP or a GFNMS RAP as a permanent sanctuary advisory council (SAC) working group and the need to create an ad-hoc or standing JRAP to advise and identify opportunities for coordinated monitoring activities.

**Products:** Evaluation on need to establish a CBNMS RAP, GFNMS RAP and a JRAP.

**Partners:** CBNMS, GFNMS, MBNMS, NMSP, advisory councils

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 4.2** Based upon the evaluation in 4.1, establish a JRAP.

**Products:** CBNMS RAP; GFNMS RAP, JRAP formed by advisory councils.

**Partners:** CBNMS, GFNMS, MBNMS, NMSP, advisory councils, MBNMS RAP

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 4.3** Establish communication protocols among the RAPs for posting agendas and minutes for sanctuary-specific and joint meetings.

**Products:** RAP list serve.

**Partners:** CBNMS, GFNMS, MBNMS, SIMoN, advisory councils, MBNMS RAP

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 4.4** Institute annual meetings for a subgroup of (~10) representatives from all three sanctuary RAPs (or research partners if a RAP does not exist) to coordinate research and monitoring activities in the region.

This meeting could be conducted in coordination with an existing annual or biennial science symposium or information transfer meeting. The meeting would be planned and organized by the monitoring coordination team members.

**Products:** Meeting summaries, recommendations, joint proposals and research plans.

**Partners:** CBNMS, GFNMS, MBNMS, NMSP, advisory councils, NCCOS

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**TABLE XEM-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING ECOSYSTEM MONITORING ACTION PLAN**

<b>Desired Outcome(s) For This Action Plan:</b>	
<b>Increased collaboration among, capacity of, and productivity of the three sanctuary monitoring programs in order to enhance our understanding of the ecosystem(s) in this region and those natural and human factors affecting them.</b>	
<b>Performance Measures</b>	<b>Explanation</b>
<p><b>1. Increase the number of cooperative research and monitoring activities from two in Year 1 to six in Year 5.</b></p>	<p>1. Research staff from the three sanctuaries currently engage in limited joint research and monitoring activities. However, to improve our knowledge and understanding about the broader ecosystem in this region, the three sites need to coordinate and systematically plan and implement joint research and monitoring activities with each other and other partners. These new joint research and monitoring activities will be reflected in each sites' Annual Operating Plan (AOP).</p>
<p><b>2. Extend the geographic range of SIMoN to include Cordell Bank and Gulf of the Farallones and expand its infrastructure so that it can be integrated with other coastal and ocean observation systems along the West Coast by Year 5.</b></p>	<p>2. SIMoN is rapidly evolving into a system-wide tool for organizing and displaying research and monitoring related information. SIMoN was developed as a prototype at the MBNMS and could be expanded to include the neighboring CBNMS and GFNMS. In addition, SIMoN should evolve so that other regional coastal and ocean observation systems could be integrated within SIMoN.</p>
<p><b>3. Design and implement coordinated monitoring programs consistent with the NMSP System Wide Monitoring Framework (SWiM) at each site by 2010.</b></p>	<p>3. The NMSP has been working for several years to develop a System Wide Monitoring (SWiM) Program Framework. The prototype of the program is underway, and once evaluated, will be ready to implement at other sites, including the three Jmpr sanctuaries.</p>

**TABLE XEM-2: CROSS-CUTTING ECOSYSTEM MONITORING ACTION PLAN TIMELINE**

<b>ECOSYSTEM MONITORING ACTION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Strategy XEM-1: Coordinate Existing Targeted Monitoring Activities to Promote Greater Efficiency and Effectiveness</b>					
<b>Activity 1.1: Coordinate individual sanctuary rocky intertidal monitoring programs and investigate opportunities to collaborate with other large-scale rocky intertidal monitoring efforts.</b>	→				→
<b>Activity 1.2: Conduct a workshop coordinate data collection protocols for Beach COMBERS and Beach Watch Programs that indirectly assess the health of the pelagic/offshore ecosystem.</b>	→				
<b>Activity 1.3: Develop an integrated sanctuary marine mammal and seabird survey monitoring plan for the three sanctuaries to coordinate and supplement the NOAA Fisheries 5-year surveys.</b>		→			
<b>Activity 1.4: Explore the potential for the expansion of existing fish surveys, such as the CalCOFI transect lines through Gulf of the Farallones and Cordell Bank, and continuation in Monterey Bay.</b>		→			
<b>Activity 1.5: Jointly developed research cruise plans and standards for sampling and reporting results for benthic habitat survey work.</b>	→				→
<b>Activity 1.6: Augment the benthic habitat survey work with new technologies such as ROV surveys.</b>	→				→
<b>Strategy XEM-2: Coordinate and Implement Existing Regional Ecosystem Monitoring Activities</b>					
<b>Activity 2.1: Implement the West Coast Observation Project at CBNMS, GFNMS and MBNMS.</b>	→				→
<b>Activity 2.2: Develop and implement an integrated NMSP's System-Wide Monitoring (SWiM) program for CBNMS, GFNMS and MBNMS.</b>		→			→
<b>Activity 2.3: Conduct a needs assessment and develop a site implementation plan for expanding SIMoN to the Gulf of the Farallones and Cordell Bank sanctuaries.</b>	→				
<b>Activity 2.4: Explore opportunities to integrate SIMoN with other regional monitoring efforts such as West Coast Observations and other IOOS projects.</b>	→				→
<b>Activity 2.5: Evaluate and identify ongoing funding opportunities to support regional and larger scale ongoing monitoring activities.</b>	→				→
<b>Strategy XEM-3: Establish a Joint Internal Monitoring Coordination Team</b>					
<b>Activity 3.1: Establish a Monitoring Coordination Team.</b>	→				
<b>Activity 3.2: Develop a research and monitoring communication plan to improve coordination among the sanctuaries' research staffs and partners.</b>	→				
<b>Activity 3.3: Evaluate and provide recommendations on the joint reporting of monitoring activities through periodic "state of the sanctuaries" reports for cross-cutting monitoring activities among the three sanctuaries.</b>			→		→
<b>Activity 3.4: Develop annual ecosystem-based research and</b>	→				→

*Ecosystem Monitoring Action Plan*  
*GFNMS Draft Management Plan*

ECOSYSTEM MONITORING ACTION PLAN	Year 1	Year 2	Year 3	Year 4	Year 5
monitoring operating plans in collaboration with each other to meet site, regional, and national monitoring needs.					
Strategy XEM-4: Consider Establishing Additional Site-Specific or a Joint Research Activities Panel to Enhance Research and Monitoring Collaborations					
Activity 4.1: Evaluate the need and feasibility of establishing a CBNMS Research Activity Panel (RAP) or a GFNMS RAP as a permanent SAC working group and the need to create an ad-hoc or standing joint research activities panel (JRAP) to advise and identify opportunities for coordinated monitoring activities.		→	.....→		
Activity 4.2: Based upon the evaluation in 5.1, establish a Cordell Bank RAP, Gulf of the Farallones RAP and/or a Joint RAP.			→		
Activity 4.3: Establish communication protocols among the RAPs for posting agendas and minutes for sanctuary-specific and joint meetings.			→		
Activity 4.4: Institute annual meetings for a subgroup of (~10) representatives from all three sanctuary RAPs (or research partners if a RAP does not exist) to coordinate research and monitoring activities in the region.				→	

**Legend:**

- Planned Activity
- .....→ Proposed Activity, based on internal assessment

**TABLE XEM-3: ESTIMATED COSTS TO IMPLEMENT THE CROSS-CUTTING ECOSYSTEM MONITORING ACTION PLAN**

Strategy	Estimated Annual Cost (1000's)*					Total Est. 5-Year Cost (1000's)
	YR 1	YR 2	YR 3	YR 4	YR 5	
Strategy XEM-1: Coordinate Existing Targeted Monitoring Activities to Promote Greater Efficiency and Effectiveness	\$183	\$183	\$183	\$183	\$183	\$915.00
Strategy XEM-2: Coordinate and Implement Existing Regional Ecosystem Monitoring Activities	\$172	\$258	\$294	\$282	\$246	\$1252.00
Strategy XEM-3: Establish a Joint Internal Monitoring Coordination Team	\$24	\$72	\$78	\$51	\$27	\$252.00
Strategy XEM-4: Consider Establishing a Joint Research Activities Panel to Enhance Research and Monitoring Collaborations	\$0	\$12	\$12	\$15	\$15	\$54.00
<b>Total Estimated Annual Cost</b>	<b>\$381</b>	<b>\$525</b>	<b>\$567</b>	<b>\$531</b>	<b>\$471</b>	<b>\$2473.00</b>
* Cost estimates are for both “programmatic” and “base” (salaries and overhead) expenses.						
** Contributions from outside funding sources also anticipated.						
For management planning purposes, the individual site cost to implement cross-cutting strategies can be calculated by dividing the estimated annual cost by three (equal cost). The actual cost to each site may vary according to strategy but will be further refined when sites prepare annual operating plans.						



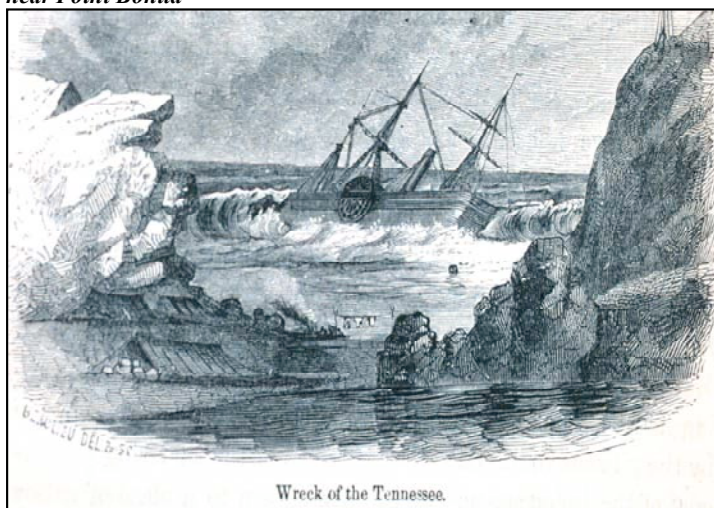


## MARITIME HERITAGE ACTION PLAN

### GOALS

The National Marine Sanctuary Program (NMSP) is developing a new program aimed to identify, protect and raise awareness of the cultural and historical resources in the three sanctuaries. Program efforts include conducting paleo-ecological and archaeological studies; inventorying, locating, and monitoring both historic shipwrecks and those that pose an environmental threat to sanctuary marine resources; and characterizing and protecting maritime heritage resources.

*Figure MH-1: The passenger-cargo steamer Tennessee runs aground near Point Bonita*



This plan provides the framework for a Maritime Heritage Resources Program that addresses historic and cultural underwater sites, as well as traditional heritage resources such as Native American and fishing communities, commercial marine transport of passengers and cargo, and recreational activities like diving, surfing, and boating. Although the NMSP only has authority to protect sanctuary cultural and historic resources, the program recognizes that traditional user and ocean-dependent groups are interconnected with the sanctuaries and are an integral part of their history.

### ISSUE DESCRIPTION

The National Marine Sanctuaries Act (NMSA) and site regulations mandate the management and protection of sanctuary cultural and historical resources. Cultural resources are defined as any historical or cultural feature, including archaeological sites, historic structures, shipwrecks, and artifacts. *Historical resources* are defined as any resources possessing historical, cultural, archaeological or paleontological significance, including sites, contextual information, structures, districts, and objects significantly associated with or representative of earlier people, cultures, maritime heritage, and human activities and events. Historical resources include “submerged cultural resources,” and also include “historical properties,” as defined in the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, as amended.

The area encompassed by Cordell Bank National Marine Sanctuary (CBNMS), Gulf of the Farallones National Marine Sanctuary (GFNMS), and Monterey Bay National Marine Sanctuary (MBNMS) is rich in cultural and historical resources, and has a long and interesting maritime history. The sea floor preserves remnants of the sites where people lived and of the vessels in which they conducted trade and fought wars. Ships, boats, wharves, lighthouses, lifesaving stations, whaling stations, prehistoric sites, and a myriad of other heritage treasures lie covered by water, sand, and time.

The history of California's central coast is predominantly a maritime one. From the days of the early Ohlone inhabitants to the exploration and settlement of California to the present, coastal waterways remain a main route of travel, subsistence, and supply. Ocean-based commerce and industries (e.g., fisheries, shipping, military, recreation, tourism, extractive industries, exploration, research, and aesthetics) are important to the maritime history, the modern economy, and the social character of this region. These constantly changing human uses define the maritime heritage of these sanctuaries and help interpret our evolving relationship with the sanctuary resources. Ports such as San Francisco and Monterey, and smaller coastal harbor towns, developed through fishing, shipping, and economic exchange. Today these have become major urban areas, bringing millions of people in proximity to national marine sanctuaries. Many of these people are connected to the sanctuaries through commercial and recreational activities such as surfing, boating, and diving.

Records indicate that 430 vessel and aircraft losses were documented between 1595 and 1950 along California's central coast from Cambria north to Bodega Head, including the Farallones Islands. Specifically, 173 in the GFNMS, 257 in the MBNMS, and none documented within the CBNMS. Some sites have been located and inventoried by the National Oceanic and Atmospheric Administration (NOAA) and the National Park Service (NPS) in the GFNMS region. GFNMS and MBNMS have also collaborated with state and federal agencies, and the private sector to gather resource documentation and to create opportunities to locate and record submerged archaeological resources. MBNMS recently completed a shipwreck inventory from established shipwreck databases, and review of primary and secondary source documentation. These studies provide a foundation for an inventory of the historic resources in the sanctuaries.

GFNMS and MBNMS, and possibly CBNMS, are also faced with the challenge of identifying and monitoring historic and non-historic shipwrecks posing environmental threats to sanctuary marine resources. Lurking in the deep are the hazardous cargoes, abandoned fuel, and unexploded ordnance inside sunken vessels that are slowly deteriorating in a corrosive marine environment. Shipwrecks already identified as a concern are the oil tanker USS *Montebello* (near the MBNMS) that may retain over three million gallons of unrefined crude oil and the C-3 freighter *Jacob Luckenbach* (GFNMS), containing Bunker-C fuel oil. In 2002, the U.S. Coast Guard contracted the removal of 85,000 gallons of Bunker-C fuel from the *Jacob Luckenbach*.

### **Submerged Site Inventory and Assessment Initiative**

NMSP regulations mandate that archaeological resources are managed consistently with the Federal Archaeological Program. The NMSP's Marine Heritage Program (MHP) and NOAA Maritime Archeological Center (MAC) were established in 2002 and 2004 respectively to emphasize the need for research, education, outreach, and protection of maritime heritage

resources. Issues to be addressed regarding the protection of submerged archaeological resources include site protection, permitting, and shipwrecks as environmental threats. GFNMS and MBNMS will partner with the Channel Island National Marine Sanctuary (CINMS) on its Shipwreck Reconnaissance Program (SRP) in California waters to record submerged sites using vocational archaeologists, remotely operated vehicles (ROV), and manned submersibles. The SRP develops underwater site maps and archaeological reports, conducts annual site monitoring, and recommends appropriate sites for inclusion in the National Register of Historic Places.

### **Shipwrecks as Environmental Threats**

GFNMS and MBNMS both coordinate with the Damage Assessment Restoration Fund and other relevant agencies. GFNMS and MBNMS will work with CINMS to expand their efforts to identify shipwrecks that may pose environmental threats and will provide pertinent information to NOAA's Hazardous Materials (HAZMAT) division and the NMSP for development of the Sanctuaries Hazardous Incident Emergency Logistics Database System (SHIELDS) and the Resources and Under Sea Threats (RUST) Geographic Information Systems (GIS) database systems.

### **Site Protection**

As submerged shipwreck sites are inventoried in CBNMS, GFNMS, and MBNMS and become more visible to the public, they are also more at risk from divers wishing to remove artifacts. CBNMS, GFNMS, and MBNMS will consider enhancing visitor usage while mitigating damage to heritage resources by providing the sport and commercial diving communities and visitors to shoreline sites with interpretive information about archaeological sites and their protection. Sanctuary and California state regulations prohibit the un-permitted disturbance of submerged archaeological and historical resources. The NMSP and California State Lands Commission (CSLC) have an archaeological resource recovery permit system in place. Protection and monitoring of these sites will become a more pronounced responsibility in the sanctuaries' heritage resources management program. Partnerships will be established with local law enforcement agencies for site monitoring and compliance of public access to submerged sites. The sanctuaries will designate a contact person(s) to coordinate with the California State Historic Preservation Office (SHPO) to ensure that permit guidelines, under the Archaeological Resources Protection Act, are followed.

### **Traditional User and Ocean-Dependent Groups**

There is the potential to cultivate partnerships with local, state, and federal programs (e.g., American Folk Life Center, universities, Department of the Interior) and the identified communities. These partnerships could aid in the design and implementation of studies of living maritime heritage and folk life to help educate the public about traditional cultures and practices including Native Americans, other ethnic residents, fishermen and economic activities reflecting historic human interaction with the ocean.

## **Education and Outreach**

CBNMS, GFNMS, and MBNMS have partnered with CINMS in the development of the West Coast Shipwreck Database online curriculum. The database serves to inform the public about the historical significance of shipwrecks, including those posing environmental threats to sanctuary marine resources, e.g., the *Jacob Luckenbach* story. The database is being expanded to include living journals assisting families searching for information about shipwrecked vessels their relatives may once have served on as crewmembers or passengers. Family members are encouraged to share with the public their living journals associated with the shipwreck histories for dissemination. CBNMS, GFNMS, and MBNMS will identify partners to explore exhibit development at maritime or regional museums and learning centers that focus on the areas' maritime heritage history; shipwrecks, exploration, fishing, and fisheries; vessel trades, routes and nationalities; and shoreline structures such as lighthouses, lifesaving stations, canneries, whaling facilities, surfing, and boating.

### **STRATEGY XMHR-1: *Establish Maritime Heritage Resources Program.***

The NMSP is placing increasing emphasis on the development of maritime heritage resources programs to identify and protect submerged archaeological sites, and to increase public awareness about the maritime history associated with individual sanctuaries. A well-coordinated program will be required to identify and assess documented shipwrecks, some of which may pose significant environmental hazards; to protect sites from unauthorized disturbance; and to develop heritage partnerships and education programs.

#### **Activity 1.1** Develop the foundation and infrastructure of a MHR Program.

**Products:** Maritime Heritage Resource (MHR) program plan and infrastructure to implement it.

**Partners:** CBNMS, GFNMS, MBNMS, NMSP-MHP, CINMS, Submerged Cultural Resources Program (SCRCP)

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>None</b>	<b>None</b>

#### **Activity 1.2** Identify potential maritime heritage partners and sources of funding.

**Products:** Database of partners and funding sources.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>None</b>	<b>None</b>

**STRATEGY XMHR-2: *Inventory and Assess Submerged Sites.***

CBNMS, GFNMS, and MBNMS, in conjunction with the West Coast Cultural Resources Coordinator, will collaborate with state and federal agencies and the private sector to gather resource documentation and to create opportunities to locate and record submerged archaeological resources. MBNMS recently completed such an inventory; GFNMS will pursue funding to update its previous inventory (done jointly with the NPS). This effort will also be coordinated with NOAA's MHP.

**Activity 2.1** Establish external partnerships to inventory potential shipwreck sites with other federal, state, and local agencies as well as vocational archaeologists, commercial divers and fishermen, and recreational divers.

**Products:** Updated inventory of potential shipwreck sites in the three sanctuaries that includes site characterizations and shipwreck assessments.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, National Park Service (NPS), California State Historic Preservation Office (SHPO)

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	None	None

**Activity 2.2** Conduct systematic research and survey methods for archaeological sites, including the remains of prehistoric, as well as historic sites, representing ship and aircraft losses.

This effort would be focused on geographic regions with a high probability of cultural and historic remains established by conducting remote sensing surveys and/or diver investigations of target sites as part of larger research cruises across the three sanctuaries. Such surveys would include the development of education materials and curriculum, a project website, a site assessment report, corrosion study, and a comparison with previous surveys.

**Products:** MBNMS survey of the USS Macon and continuing efforts to survey the Lukenbach and Montebello.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, NPS, SHPO

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	None	None

**Activity 2.3** Establish a shipwreck reconnaissance and site monitoring program.

Use a model similar to CINMS to record and monitor submerged sites and to document new artifact discoveries and evaluation of human site disturbance. Record site positions in NOAA's ARCH geographic information systems (GIS) database.

**Products:** Expanded site information in NOAA's ARCH.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 2.4** Assess and Nominate Appropriate Submerged Archaeological Sites for Inclusion in the National Register of Historic Places.

**Products:** Applications for site inclusion in the National Register of Historic Places.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, NPS, SHPO

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**STRATEGY XMHR-3: *Assess Shipwrecks and Submerged Structures for Hazards.***

GFNMS and MBNMS, and possibly CBNMS, are faced with the challenge of identifying and monitoring historic and non-historic shipwrecks that may pose environmental threats to sanctuary marine resources. Information pertaining to shipwrecks as environmental threats is provided to NOAA's HAZMAT division and the Office of National Marine Sanctuaries for the development of the SHIELDS and RUST database systems. The sanctuaries will develop a plan to address this issue since there are many shipwrecks that pose threats in the near future.

**Activity 3.1** Establish an inventory of shipwrecks, inside and outside of sanctuary boundaries, posing environmental threats to sanctuary marine resources.

This inventory is based upon primary and secondary source documentation from established shipwreck databases, interviews with commercial divers and fishermen, and recreational divers who frequently visit submerged shipwrecks. The sanctuaries will also collaborate with other organizations doing similar research. As the sanctuaries compile information regarding sites that may pose environmental threats, this information will be coordinated with NOAA's HAZMAT division and the Office of National Marine Sanctuaries for the development of the SHIELDS and RUST database systems.

**Products:** Inventory of sites that may pose environmental threats, including a priority listing of shipwreck sites to be located via reconnaissance dives. Evaluation reports on sites submitted to federal and state trustee agencies for potential remediation.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, NOAA HAZMAT, NOAA Office of Response and Restoration (ORR), NPS, SHPO

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 3.2** Establish a monitoring program for shipwreck sites.

Develop protocols for site evaluation, including timelines for long-term monitoring. Direct efforts to monitor sites that have been located and are considered a threat to sanctuary marine resources based on the monitoring work at such sites as the *Jacob Luckenbach* and the *Montebello*.

**Products:** A shipwreck monitoring plan.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, NPS, SHPO

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	None	None

**Activity 3.3** Coordinate with partners to reduce threats from shipwrecks.

GFNMS and MBNMS will work with NMSP to expand efforts to identify shipwrecks that may pose environmental threats and will provide pertinent information to NOAA's HAZMAT division and the NMSP for the development of the SHIELDS and RUST GIS database systems. Shipwrecks identified as a potential threat to leak or spill hazardous waste will be regularly monitored, and NMSP will work with other trustee agencies to develop a plan to prevent, reduce, and respond to environmental threats from these vessels.

**Products:** A threat mitigation plan.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, NOAA HAZMAT, NOAA ORR, NPS, SHPO

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	None	None

**Activity 3.4** For historic shipwrecks, ensure compliance under Section 106 of the National Historic Preservation Act (NHPA) and the National Marine Sanctuary Act (NMSA).

**Products:** Final Reports of Post Site Disturbance Documentation and/or Archaeological Site Reports submitted to the SHPO.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MAC, NOAA HAZMAT, NOAA ORR, NPS, SHPO

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	None	None

#### **STRATEGY XMHR-4: *Protect and Manage Submerged Archaeological Resources.***

The NMSP regulations mandate that archaeological resources be managed consistent with the Federal Archaeological Program. The NMSP's MHP and MAC were established in 2002 and 2004 respectively to emphasize the need for research, education, outreach, and protection of

heritage resources. Issues to be addressed by GFNMS, MBNMS, and possibly CBNMS, regarding the protection of submerged archaeological resources include:

- Permitting
- Site protection through enforcement and education
- Shipwrecks as environmental threats

**Activity 4.1** Jointly develop uniform protocol to manage, monitor, and protect submerged sites within the three sanctuaries in partnership with appropriate local law enforcement agencies.

**Products:** Monitoring and permitting protocols, enforcement surveillance and inspection program as appropriate, mooring system plan if needed at dive sites.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MAC, NPS, SHPO, NOAA Office of Law Enforcement (OLE)

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 4.2** Provide training to sanctuary staff and facilitate training for partners.

The training will focus on the importance of submerged archaeological resources and the need and tools to manage and protect them.

**Products:** A comprehensive training program.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP, NPS, SHPO, NOAA Office of Law Enforcement (OLE)

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 4.3** Identify archaeological and historic resources currently outside sanctuary boundaries that may be of significant historic interest or may pose a threat to sanctuary resources.

Explore the appropriateness, feasibility and need to (1) consider expanding existing boundaries to protect site(s) as maritime heritage resources or (2) work with the state to establish a state marine cultural preservation area (e.g., the USS *Montebello*, 1.6 nautical miles south of the MBNMS near Cambria, others to be determined).

**Products:** Site assessments and recommendations for preservation and/or protection.

**Partners:** CBNMS, GFNMS, MBNMS, MHP, NPS, SHPO

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**STRATEGY XMHR-5: *Conduct Public Outreach with Traditional User and Ocean-Dependent Groups and Communities.***

A key aspect of the CBNMS, GFNMS, and MBNMS maritime heritage program will be to educate the public about traditional maritime cultures and practices including Native Americans; exploration; settlement; ethnic groups; whalers; historic and present-day fishermen; recreational uses; and traditional shipping, shipbuilding, canneries, and other economic activities reflecting historic human interaction with the ocean. Although sanctuary protection status is given only to cultural and historical resources, the program recognizes that traditional user and ocean-dependent groups are interconnected with the sanctuaries and are an integral part of their history. Therefore, this program will also acknowledge those traditional maritime heritage activities and practices consistent with the NMSA's primary goal of resource protection, such as sustainable fishing methods and recreational uses.

**Activity 5.1** Identify traditional user and ocean-dependent groups.

Solicit and document the range of traditional user and ocean-dependent groups' ideas, values, etc. Conduct a literature search to gather resource documentation on traditional users and ocean-dependent groups and communities. Use this information to prioritize appropriate aspects of their maritime heritage.

**Products:** Sanctuary user groups and community historic analysis.

**Partners:** CBNMS, GFNMS, MBNMS, CINMS, MHP

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>CB</b>	<b>FA-6</b>
	<b>GF</b>	<b>FA-2</b>

**Activity 5.2** Develop collaborative programs and initiatives.

GFNMS will initiate a partnership with the fishing community at Pillar Point Harbor to enhance relationships and jointly develop ways to educate the public on the interconnections with the three sanctuaries.

**Products:** Pillar Point maritime heritage community demonstration initiative. Collaborative programs such as sustainable seafood events, adopt-a boat classroom programs (e.g., SEA Grant-Marine program), historic re-enactments at harbors, Native American village sites.

**Partners:** CBNMS, GFNMS, MBNMS, San Mateo County Harbor District – Pillar Point, Half Moon Bay Fishermen's Association, CA Sea Grant

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 5.3** Create an inventory of historic and present maritime heritage communities.

Focus on traditionally associated people to support mapping and interpretive programs. Assess and nominate appropriate sites for the National Register of Historic Places.

**Products:** Database inventory of maritime heritage communities and sites; nominations for the National Register of Historic Places.

**Partners:** CBNMS, GFNMS, MBNMS, MHP, NPS, SHPO

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>CB</b>	<b>FA-6</b>
	<b>GF</b>	<b>FA-2</b>

**Activity 5.4** Map and document traditional communities and sites.

These communities and sites may include fishing and whaling sites; shipping/commercial marine transport of passengers and cargo; lighthouses and life-saving stations; tribes (coastal); and recreational uses such as surfing and diving.

**Products:** Tri-sanctuary map of traditional communities and sites.

**Partners:** CBNMS, GFNMS, MBNMS, MHP, NPS, SHPO

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>FA-2</b>

**STRATEGY XMHR-6: *Establish Maritime Heritage Focused Education and Outreach Programs.***

Maritime Heritage provides a unifying theme to educate and inform people along the California coast and throughout the country about the historic human interaction with the ocean. Through websites, museum exhibits, and other tools, the sanctuaries will provide information on:

- Programs by and about traditional cultures and practices including Native Americans, ethnic groups, fishermen, and economic activities
- Shipwrecks, exploration, fishing and fisheries; trade vessels, routes and nationalities
- Shoreline structures such as lighthouses, life-saving stations, canneries, whaling facilities
- Traditional recreational activities such as diving, surfing, and boating
- Stewardship of our cultural and historic maritime resources

**Activity 6.1** Improve information sharing and dialogue.

Hold an annual maritime heritage event to highlight specific cultural and historic resources that the sites are mandated to protect, such as archeological sites, shipwrecks, etc., and link to adjacent communities and human uses.

**Products:** Annual community event focusing on maritime heritage resources.

**Partners:** CBNMS, GFNMS, MBNMS, MHP, NPS, SHPO, local maritime museums and historic parks

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 6.2** Create, expand and populate individual sanctuary websites and/or the West Coast Shipwreck Database.

The websites should include specific information about maritime heritage resources, such as living journals of traditional users and ocean-dependent groups as well as shipwreck survivors, archaeological project updates, potential environmental threats, and maps.

**Products:** Expanded maritime heritage Web-based information.

**Partners:** CBNMS, GFNMS, MBNMS

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 6.3** Develop and implement education and outreach programs and materials for the MHP.

Incorporate traditional users/ocean-dependent groups and submerged archaeological resources into existing and new education/outreach programs.

**Products:** Maritime heritage programs, brochures, posters, etc.

**Partners:** CBNMS, GFNMS, MBNMS, MHP, NPS, SHPO, local maritime museums and historic parks.

	<u>Sanctuary</u>	<u>Management Plan Strategy Reference</u>
Cross-Reference:	None	None

**Activity 6.4** Collaborate on maritime heritage resource exhibits and signage.

GFNMS and MBNMS are currently collaborating on a joint interpretive exhibit at Pigeon Point Lighthouse in San Mateo County. The three sites will incorporate maritime heritage themes and messages as part of the California Statewide Signage, Exhibits, and Facilities plan.

**Products:** Joint interpretive exhibits at Pigeon Point Lighthouse and other locations, joint signage, and joint public lecture series.

**Partners:** CBNMS, GFNMS, MBNMS, MHP, NPS, SHPO, local maritime museums and historic parks

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GF	ED-9, ED-12, ED-13

**TABLE XMHR-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING MARITIME HERITAGE RESOURCES ACTION PLAN**

<b>Desired Outcome(s) For This Action Plan:</b>	
Establish a well-coordinated joint maritime heritage program that identifies and assesses documented shipwrecks and associated environmental hazards; protects sites from unauthorized disturbance; and develops heritage partnerships and education programs.	
<b>Performance Measures</b>	<b>Explanation</b>
By Year 5, the Maritime Heritage program will identify and characterize all historical and cultural resources in these three sanctuaries in a Web database and, when appropriate, develop plans to protect these resources from threats. In the case of ships that pose a threat from oil spills, plans will be developed to mitigate harmful effects on natural resources.	The specific maritime heritage activities identified in this plan build upon existing site efforts and collectively establish a new joint maritime heritage program for this region. The program will allow these sites to be responsive to the NMSA mandate to identify and protect cultural and historic resources. Implementation of these strategies will better streamline and coordinate overall NMSP efforts to protect maritime heritage resources and expand awareness of the importance of these resources to the public.

**TABLE XMHR-2: CROSS-CUTTING MARITIME HERITAGE RESOURCES ACTION PLAN TIMELINE**

<b>MARITIME HERITAGE RESOURCES</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Program Establishment					
Strategy XMHR-1: Establish Maritime Heritage Resources Program					
Activity 1.1: Develop the foundation and infrastructure of a MHR program.	.....	→			
Activity 1.2: Identify and assist partners doing maritime heritage related work to obtain funding and resources.		→	→	→	→
Resources Assessment and Protection					
Strategy XMHR-2: Inventory and Assess Submerged Sites					
Activity 2.1: Establish external partnerships to inventory potential shipwreck sites with other federal, state, and local agencies as well as vocational archaeologists, commercial divers and fishermen, and recreational divers.			→	→	→
Activity 2.2: Conduct systematic research and survey for archaeological sites, including the remains of prehistoric sites, as well as historic sites that represent ship and aircraft losses.	.....	→	→	→	→
Activity 2.3: Establish a Shipwreck Reconnaissance and Site-Monitoring Program.			→	→	→
Activity 2.4: Assess and nominate appropriate submerged archaeological sites for inclusion in the National Register of				→	→

*Maritime Heritage Action Plan*  
*GFNMS Draft Management Plan*

MARITIME HERITAGE RESOURCES	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Historic Places.</b>					
Strategy XMHR-3: Assess Shipwrecks and Submerged Structures for Hazards					
<b>Activity 3.1: Establish an inventory of shipwrecks, inside and outside of sanctuary boundaries, that may pose environmental threats to sanctuary marine resources.</b>			—————▶		
<b>Activity 3.2: Establish a monitoring program for shipwreck sites.</b>			—————▶	—————▶	
<b>Activity 3.3: Coordinate with partners to reduce threats.</b>			—————▶	—————▶	
<b>Activity 3.4: For historic shipwrecks, ensure compliance under Section 106 of the National Historic Preservation Act (NHPA) and the National Marine Sanctuary Act (NMSA).</b>			—————▶	—————▶	
Strategy XMHR-4: Protect and Manage Submerged Archaeological Resources					
<b>Activity 4.1: Jointly develop uniform protocol to manage, monitor, and protect submerged sites within the three sanctuaries in partnership with appropriate local law enforcement agencies.</b>				—————▶	
<b>Activity 4.2: Provide training to sanctuary staff and facilitate training for partners.</b>				—————▶	
<b>Activity 4.3: Identify archaeological and historic resources currently outside sanctuary boundaries that may be of significant historic interest or may pose a threat to sanctuary resources.</b>				—————▶	
Partnerships, Education and Outreach					
Strategy XMHR-5: Conduct Public Outreach with Traditional User and Ocean-Dependent Groups and Communities					
<b>Activity 5.1: Identify traditional user and ocean-dependent groups.</b>		—————▶	—————▶	—————▶	—————▶
<b>Activity 5.2: Develop collaborative programs and initiatives.</b>		—————▶	—————▶	—————▶	—————▶
<b>Activity 5.3: Create an inventory of historic and present maritime heritage communities.</b>		—————▶	—————▶	—————▶	—————▶
<b>Activity 5.4: Map and document traditional communities and sites.</b>			—————▶	—————▶	—————▶
Strategy XMHR-6: Establish Maritime Heritage Focused Education and Outreach Programs					
<b>Activity 6.1: Improve information sharing and dialogue.</b>	.....▶	—————▶	—————▶	—————▶	—————▶
<b>Activity 6.2: Create, expand and populate individual sanctuary websites and/or the West Coast Shipwreck Database.</b>		.....▶	—————▶	—————▶	—————▶
<b>Activity 6.3: Develop and implement education and outreach programs and materials for the Maritime Heritage Program.</b>	.....▶	—————▶	—————▶	—————▶	—————▶
<b>Activity 6.4: Collaborate on maritime heritage resource exhibits and signage.</b>	.....▶	—————▶	—————▶	—————▶	—————▶

**Legend:**

- ▶ Planned Activity
- .....▶ Proposed Activity, based on internal assessment

**TABLE XMHR-3: ESTIMATED COSTS TO IMPLEMENT THE CROSS-CUTTING MARITIME HERITAGE RESOURCES ACTION PLAN**

Strategy	Estimated Annual Cost (1000's)*					Total Est. 5-Year Cost (1000's)
	YR 1	YR 2	YR 3	YR 4	YR 5	
Strategy XMHR-1: Establish Maritime Heritage Resources Program	\$55.5	\$55.5	\$0	\$0	\$0	\$111
Strategy XMHR-2: Inventory and Assess Submerged Sites	\$81	\$81	\$72	\$72	\$72	\$378
Strategy XMHR-3: Assess Shipwrecks and Submerged Structures for Hazards	\$0	\$0	\$51	\$51	\$51	\$153
Strategy XMHR-4: Protect and Manage Submerged Archaeological Resources	\$0	\$0	\$0	\$24	\$24	\$48
Strategy XMHR-5: Conduct Public Outreach with Traditional User and Ocean-Dependent Groups and Communities	\$39	\$39	\$58.5	\$58.5	\$58.5	\$253.5
Strategy XMHR-6: Establish Maritime Heritage Focused Education and Outreach Programs	\$61.5	\$61.5	\$64.5	\$64.5	\$64.5	\$316.5
<b>Total Estimated Annual Cost</b>	<b>\$237</b>	<b>\$237</b>	<b>\$246</b>	<b>\$270</b>	<b>\$270</b>	<b>\$1,260</b>
* Cost estimates are for both “programmatic” and “base” (salaries and overhead) expenses.						
** Contributions from outside funding sources also anticipated.						
For management planning purposes, the individual site cost to implement cross-cutting strategies can be calculated by dividing the estimated annual cost by three (equal cost). The actual cost to each site may vary according to strategy but will be further refined when sites prepare annual operating plans.						





# **NORTHERN MANAGEMENT AREA TRANSITION PLAN ACTION PLAN**

## **GOAL**

The goal of the Northern Management Area (NMA) Transition Plan is to identify specific strategies and activities that would implement a National Marine Sanctuary Program (NMSP) decision to transfer administrative and management authority in the northern management area of the Monterey Bay National Marine Sanctuary (MBNMS) to the Gulf of the Farallones National Marine Sanctuary (GFNMS).

## **ISSUE DESCRIPTION**

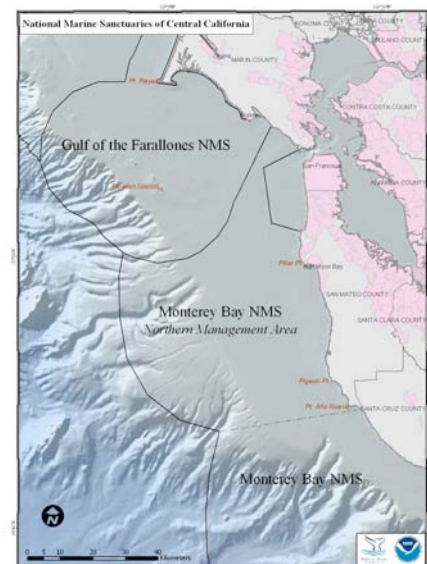
The NMA Transition Plan is the outcome of a process to resolve the “MBNMS-GFNMS boundary” issue. Resolution of this shared boundary issue was identified as a priority within the Joint Management Plan Review (JMPR) public scoping meetings and the sanctuary advisory council (SAC) prioritization process. The NMSP established an internal working group to develop recommendations on how to address this issue. The NMSP solicited public comments and held a joint advisory council meeting to discuss the recommendation. At the conclusion, the NMSP determined that the Gulf of the Farallones would assume full administrative and management responsibilities of the area extending from the San Mateo/Santa Cruz County line northward to the existing boundary between the MBNMS and GFNMS, though the existing legal sanctuary boundaries remain the same. For convenience, this area is informally referred to as the Northern Management Area (NMA) (see Figure 1).

## **NORTHERN MANAGEMENT AREA (NMA) ADMINISTRATION & OPERATIONS**

Administration and operations are the specific staffing, facilities, vessels, and procedural elements that are needed to effectively manage a site or area. Most of the specific activities associated with transferring the office administration, expanding the existing office, and hiring new staff have already been completed and are not included here.

### **STRATEGY XNAO-1: *Create a Multi-Functional Half Moon Bay (HMB) Regional Office.***

**Activity 1.1** Expand the existing Half Moon Bay office, or



**Figure 1: Northern Management Area**

relocate to a new location.

**Products:** New multi-purpose office, ideally along Pillar Point Harbor to provide a multi-purpose facility (district staff office, space for volunteers/interns, accessible and visible visitor center, public meeting space).

**Partners:** GFNMS, MBNMS, San Mateo Harbor District

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**STRATEGY XNAO-2: *Evaluate the Delivery and Success of NMSP Programs and Services in the NMA.***

**Activity 2.1** Conduct an evaluation of the delivery and success of NMSP programs and services to local communities in the NMA.

**Products:** Analysis of success using performance measures that have been established to measure the delivery and effectiveness of NMSP programs and services to local communities in the NMA.

**Partners:** Transition Team, GFNMS, MBNMS and headquarters staff

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>AD-6.2, AD-6.3</b>

**NORTHERN MANAGEMENT AREA (NMA) RESOURCE PROTECTION**

Resource protection encompasses several program areas and includes a diverse range of management issues. The overall goal for resource protection in the NMA is to maintain a high level of protection for sanctuary resources in this area by creating a resource protection team that works collaboratively and capitalizes on the strengths and expertise of individual staff, regardless of which site they are located in. GFNMS staff will take the lead on most resource protection issues originating in the NMA, except for water quality issues, which will continue to be overseen by MBNMS. However, the MBNMS regulations will continue to apply in this area and any policy development, permits, authorizations or other significant actions must be closely coordinated with appropriate MBNMS staff. Though the actual issue and expertise of staff will factor into who ultimately works on an issue, the following protocol provides a general guideline:

- Issue primarily located in MBNMS and straddles NMA (e.g., Shoreline Armoring): MBNMS staff takes the lead and coordinates with GFNMS staff.
- Issue primarily located in GFNMS and straddles NMA (e.g., Lukenbach Spill/Clean-up): GFNMS staff takes the lead and coordinates with MBNMS staff.
- Issue only located in NMA (e.g., Mavericks Tow-in Surfing): GFNMS staff takes the lead and coordinates with MBNMS staff.

When addressing specific resource protection issues, sanctuary superintendents often seek advice and recommendations from their respective advisory councils. The following protocols provide general guidance as to how the advisory councils will be involved on issues affecting the NMA.

- Primarily in the MBNMS and straddles the NMA: Issue first goes to the MBNMS Advisory Council for action. Their recommendations are forwarded to the GFNMS Advisory Council for comment and action.
- Primarily in the GFNMS and straddles the NMA: Issue first goes to the GFNMS Advisory Council for action. Their recommendations are forwarded to the MBNMS Advisory Council for comment and action.
- Only in the NMA: Issue first goes to the GFNMS Advisory Council for action. Their recommendations are forwarded to the MBNMS Advisory Council for comment and action.

If there are fundamental differences in the recommendations between the advisory councils, a joint working group will be formed to resolve the differences. If no resolution can be reached, the separate recommendations from the advisory councils will be forwarded to the sanctuary superintendents, who will consider both recommendations before making a decision.

**STRATEGY XNRP-1: *GFNMS Will Be Responsible for Permit Activities in the NMA.***

**Activity 1.1** GFNMS will process permits within the NMA, except for water quality permits, which will continue to be overseen by MBNMS.

**Products:** Permit review, processing and issuance in the NMA.

**Partners:** GFNMS and MBNMS resource protection staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GF	RP-5

**Activity 1.2** GFNMS staff will take the lead in considering the development of protocols for a Special Use Permit for tow-in surfing at Mavericks as envisioned in the MBNMS revised management plan and coordinate such proposed actions with MBNMS staff.

**Products:** Consideration and development of a Special Use Permit program for Mavericks, education materials and training program, and enforcement strategy.

**Partners:** GFNMS and MBNMS resource protection staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GF	RP-5
	MB	OA-9, MPWC-3, MPWC-4, MPWC-5

**STRATEGY XNRP-2: GFNMS Will Be Responsible for Regulatory Activities in the NMA While Maintaining Maximum Consistency and Protection to Sanctuary Resources.**

**Activity 2.1** GFNMS staff will take the lead in evaluating a potential new dredge disposal site for Pillar Point Harbor should a detailed site proposal be developed by the San Mateo County Harbor District for submission to federal and state agencies.

Such an action would require changing the MBNMS regulations and designation document and require coordination with the MBNMS staff, and approval from the MBNMS superintendent.

**Products:** Assessment and recommendation regarding any new dredge disposal site proposal; possible change to the MBNMS regulations and designation document.

**Partners:** GFNMS & MBNMS resource protection staff

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>MB</b>	<b>HDD-2.3, OA-11.1(c)</b>

**Activity 2.2** GFNMS staff will facilitate a public process in the next five years to consider whether the San Francisco Exemption Area (a.k.a. “the donut hole”) should be incorporated into the MBNMS.

Such an action would require changing the MBNMS regulations and designation document and require coordination with MBNMS staff, and approval from the MBNMS Superintendent.

**Products:** Assessment and recommendation on whether to include this area in the MBNMS. This could result in a change to the MBNMS regulations and designation document.

**Partners:** GFNMS and MBNMS resource protection staff

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>None</b>	<b>None</b>

**Activity 2.3** The GFNMS and MBNMS Resource Protection Teams will closely coordinate on any future proposed regulatory changes that could impact the NMA or the other sanctuaries.

**Products:** Potential regulatory modifications.

**Partners:** GFNMS and MBNMS resource protection staff

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>RP-4</b>
	<b>MB</b>	<b>OA-12</b>

**STRATEGY XNRP-3: *GFNMS Staff will Coordinate Existing and Emerging Resource Protection Issues in the NMA.***

**Activity 3.1** GFNMS staff will lead efforts to coordinate and implement JMPR site-specific activities to support resource protection and stewardship in the NMA and the delivery of services and programs to local communities.

**Products:** Implement JMPR resource protection strategies and activities.

**Partners:** GFNMS and MBNMS resource protection staff

Cross-Reference:

- Coastal Development
  - Dredge Disposal MB (HDD-1, HDD-3 to HDD-5)
  - Desalination MB (DESAL-1 to DESAL-5)
  - Coastal Armoring MB (CA-1 to CA-4)
  - Submerged Cables MB (SC-1 & SC-2)
- Benthic Habitats MB (BH-1 to BH-7)
- Fishing Activities
  - Impacts from fishing activities GF (FA-1 to FA-6)
  - Fishing related research and education MB (FER-1 to FER-7)
  - Krill Harvest MB (KH-1 to KH-3) & GF (GF-7)
- Emerging Issues MB (EI-1 to EI-3); GF (RP-1 to RP-5, XAO 4.3)
- Maritime Heritage XMHR-3, XMHR-4
- Introduced Species MB (IS-1 to IS-5) & GF (IS-1 to IS-9)
- Special Marine Protected Areas MB (SMPA-1 to SMPA-11)
- Ecosystem Protection Plan GF (EP-1 to EP-3)
- Wildlife Disturbance
  - Marine Mammals, Seabirds and Turtles MB (MMST-1 to MMST-4) & GF (WD-1 to WD-6)
  - Motorized Personal Watercraft MB (MPWC-1 to MPWC-4)
  - Tidepools MB (TP-1 to TP-7) & GF (WD-2)

**Activity 3.2** GFNMS staff will lead efforts to consult and coordinate on resource protection issues with other local, state and federal resource management agencies in the NMA.

Staff will also work with these agencies and other partners to implement specific resource protection strategies and activities identified in the JMPR.

**Products:** Implemented JMPR resource protection strategies and activities.

**Partners:** GFNMS and MBNMS resource protection staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GF	AD-5, RP-4, RP-5
	MB	OA-12

**STRATEGY XNRP-4: *GFNMS Staff will Coordinate Enforcement Activities in the NMA.***

**Activity 4.1** GFNMS staff will oversee the planning and implementation of all NMA enforcement activities in the NMA and will coordinate with MBNMS to ensure consistency across the sites.

**Products:** Enforcement cases investigated. Surveillance activities. Updated Enforcement plan.

**Partners:** GFNMS & MBNMS resource protection staff, MBNMS Enforcement Officer and the National Oceanic and Atmospheric Administration-Office of Law Enforcement (NOAA-OLE)

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GF	PR-6 and scattered throughout GFNMS Management Plan (MP)

**STRATEGY XNRP-5: *GFNMS Staff will Coordinate NMA Emergency Response Activities in the NMA.***

**Activity 5.1** GFNMS staff will lead and closely coordinate efforts to respond to emergencies in the NMA to ensure maximum resource protection to sanctuary resources.

**Products:** Communication strategy that recognizes site-specific and regional emergency response plans.

**Partners:** GFNMS and MBNMS resource protection staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	GF	RP-7, RP-8, VS-7, VS-8
	MB	OA-5 & XAO-4.3 (scattered throughout JMPR)

**STRATEGY XNRP-6: *MBNMS Water Quality Protection Program Staff Will Continue to Coordinate Water Quality Activities in the NMA.***

**Activity 6.1** Implement existing Water Quality Protection Program (WQPP) activities.

MBNMS WQPP staff will continue to implement water quality activities (planning, implementation of management measures, partnership and stakeholder coordination, monitoring and outreach) in the NMA and regularly communicate with GFNMS staff to enhance understanding of the activities underway.

**Products:** WQPP Plans implemented in the NMA. New GFNMS WQPP assessment completed.

**Partners:** MBNMS WQPP staff and GFNMS resource protection staff

Cross-Reference:

- Water Quality
  - Beach Closures MB (BC-1 to BC-10)
  - Cruise Ship Discharge MB (CS-1 to CS-4)
- Vessel Spills GF (VS-1 to VS-13)
  - WQPP Memorandum of Agreement MB (MOA-1 to MOA-3)
  - WQPP Implementation MB (WQPP-1 to WQPP-23)
  - GF Water Quality (WQ-2, WQ-3, WQ-5, WQ-6, WQ-9)

**Activity 6.2** Conduct site water quality needs assessment.

MBNMS has hired a new regional WQPP specialist who will be assigned to work with GFNMS staff (and other west coast sanctuary staff) on their specific needs and threats, and assess how existing MBNMS water quality programs or processes could be translated or modified to meet those needs, or whether new programs should be developed. Once these assessments are done, the new WQPP regional specialist will assist the sites in designing the appropriate plans and building site capacity for implementation, drawing on individual MBNMS subject matter staff where possible. Note that this new water quality position is not focused on the NMA specifically, but on providing assistance to all west coast sanctuaries, including GFNMS. However, opportunities for regional approaches that could benefit the NMA will also be pursued.

**Products:** New Regional WQPP staff member. Site-by-site needs assessment.

**Partners:** MBNMS WQPP staff and GFNMS resource protection staff

Cross-Reference: (see Cross-Reference in 6.1)

**Activity 6.3** Review and issue water quality authorizations.

MBNMS staff will continue to review water quality permits in the NMA, and issue authorizations with appropriate conditions to minimize impacts as outlined in the MBNMS water quality memorandum of agreement (MOA). MBNMS staff will coordinate with and seek input from GFNMS staff in reviewing these permits.

**Products:** Permit and authorization review and issuance.

**Partners:** MBNMS WQPP staff and GFNMS resource protection staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	MB	MOA-1 to MOA-3, XNRP-1

## **NORTHERN MANAGEMENT AREA (NMA) RESEARCH AND MONITORING**

The GFNMS research coordinator will be the lead on most research and monitoring projects and programs in the NMA. The research coordinator will work closely with the MBNMS and CBNMS research coordinators to ensure that the projects are integrated and coordinated. One of the overall goals for research and monitoring in the NMA, and more broadly across the region, is to capitalize on the strengths and expertise of individual staff regardless of their site location. As such, staff from either site may be requested to consult or work on research and monitoring projects in the NMA based on their area of expertise. For example, if a proposed research project in the NMA involves rocky intertidal issues, then those MBNMS staff with expertise and experience on these issues would be involved. Likewise, if there were an issue where GFNMS staff had more experience (e.g., seabirds or marine mammals) then they would be involved. There are many research and monitoring projects already being implemented by both sites in the NMA and many more issue-based projects that could be jointly or separately implemented. The research staff from the two sites will continue to discuss opportunities for collaborative implementation of these programs and activities. Though the actual issue and expertise of staff will factor into who ultimately works on a research and monitoring issue, the following protocol provides a general guideline:

- Issue primarily located in MBNMS and straddles the NMA (e.g., SIMoN): the MBNMS staff takes the lead and coordinates with the GFNMS staff.
- Issue primarily located in GFNMS and straddles the NMA (e.g., seabird monitoring): the GFNMS staff takes the lead and coordinates with the MBNMS staff.
- Issue only located in the NMA (e.g., wildlife disturbance monitoring near Pillar Point): the GFNMS staff takes the lead and coordinates with the MBNMS staff.

When addressing some research and monitoring issues, sanctuary superintendents may seek advice and recommendations from their respective advisory councils. The following protocols provide general guidance as to how the advisory councils will be involved on research and monitoring issues affecting the NMA.

- Primarily in the MBNMS and straddles the NMA: Issue first goes to the MBNMS Advisory Council for action. Their recommendations are forwarded to the GFNMS Advisory Council for comment and action.
- Primarily in the GFNMS and straddles the NMA: Issue first goes to the GFNMS Advisory Council for action. Their recommendations are forwarded to the MBNMS Advisory Council for comment and action.
- Only in the NMA: Issue first goes to the GFNMS Advisory Council for action. Their recommendations are forwarded to the MBNMS Advisory Council for comment and action.

If there are fundamental differences in the recommendations between the advisory councils, a joint working group will be formed to resolve the differences. If no resolution can be reached, the separate recommendations from the advisory councils will be forwarded to the sanctuary superintendents, who will consider both recommendations before making a decision.

**STRATEGY XNRM-1: *Share Information.***

**Activity 1.1** Develop and implement procedures for sharing information on existing research and monitoring projects and coordinate on future projects.

**Products:**

- Briefings on select existing projects, for example:
  - Rocky intertidal monitoring
  - Beached bird survey
  - SIMoN
  - Ecosystem dynamics study/pelagic monitoring
  - Trustee restoration projects (Rhinoceros Auklet)
  - Black abalone withering foot study
  - Elephant seal database
- Conduct an annual coordinators' meeting to identify and plan joint research projects among the sites. These should be included in each site's Annual Operating Plan (AOP).
- Develop a Research & Monitoring Communication Plan.

**Partners:** CBNMS), GFNMS, MBNMS, & Sanctuary Integrated Monitoring Network (SIMoN) Research Personnel

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:		XEM-1 to XEM-3, XAO-1.2, XAO-2.1, XAO-2.2

**STRATEGY XNRM-2: *Coordinate Research and Monitoring Information Dissemination.***

**Activity 2.1** Update, cross-link, and develop Web products for GFNMS, MBNMS and SIMoN websites.

**Products:** Update site characterization, research and monitoring content on website, cross-link existing studies, maps, and data that apply to the NMA.

**Partners:** GFNMS & MBNMS Research and IT Personnel

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:		XEM-1 to XEM-3, XNEO-3

**STRATEGY XNRM-3: *Collaborate on Sanctuary Advisory Committees and Working Groups on Research and Monitoring Issues Related to the NMA.***

**Activity 3.1** Assess current and future NMSP participation on technical advisory committees or working groups in the NMA (such as Fitzgerald Marine Reserve, MBNMS Research Activity Panel (RAP).

Based upon the technical needs of the group, determine who is the most appropriate staff person to participate in the group. There may be instances when it is appropriate to have more than one NMSP research staff on the committee, depending upon the needed expertise.

**Products:** Inventory of staff participation in external research and monitoring technical advisory panels. As necessary, update staff expertise and assignment inventory.

**Partners:** CBNMS, GFNMS & MBNMS Research Personnel

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:		<b>XEM-1</b>

**STRATEGY XNRM-4: *Collaborate on Volunteer Monitoring Efforts Related to the NMA***

**Activity 4.1** Continue efforts to coordinate and collaborate Beach Watch and Beach Coastal Ocean/Marine Bird Education Research Surveys (COMBERS) volunteer monitoring programs.

**Products:** Continue to share annual reports. Continue to communicate unusual mortality and oil/HAZMAT incidences.

**Partners:** CBNMS, GFNMS & MBNMS research personnel and volunteer coordinators

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b> <b>MB</b>	<b>RE-1, WD-2, IS-5</b> <b>OA-4</b>

**STRATEGY XNRM-5: *Implement JMPR Site-Specific Research and Monitoring Activities in the NMA.***

**Activity 5.1** The GFNMS and MBNMS research teams will coordinate on the implementation of JMPR site-specific and cross-cutting ecosystem research and monitoring activities in the NMA.

**Products:** Coordinate efforts to implement specific research and monitoring projects based on a Joint Research and Monitoring Annual Operating Plan.

**Partners:** GFNMS and MBNMS research staff

Cross-Reference:

- Coastal Development
  - Coastal Armoring MB (CA-1, CA-2)
  - Desalination MB (DESAL-2, DESAL-4)
  - Harbors and Dredge Disposal MB (HDD-2, HDD-3 to HDD-5)
  - Submerged Cables MB (SC-1, SC-2)
- Ecosystem Protection
  - Impact from Bottom Trawling GF (FA-1 to FA-6) & MB (BH-2 to BH-5)
- Ecosystem Monitoring CB (RE-7 to RE-9), GF (FA-1), XEM-1 to XEM-3
- Emerging Issues MB (EI-1, EI-2)

- Introduced Species GF (IS-1 to IS-5), MB (IS-1 to IS-3)
- Maritime Heritage XMHR-2
- Special Marine Protected Areas (MPA-2, MPA-3, MPA-5, MPA-6, MPA-9)
- Species Distribution GF (VS-5)
- Volunteer Monitoring GF (RE-1), MB (OA-2), XNRM-4
- Fishing Related Research MB (FER-2, FER-3, FER-5, FER-7)
- SIMoN/Databases CB (RE-10), GF (VS-8), MB (SI-2, SI-3, SI-5, SI-6)
- Water Quality Issues
  - Assessment and status GF (WQ-8)
  - Beach Closure and Contamination MB (BC-1 to BC-4)
  - Water Quality Protection Program Implementation MB (WQPP-8, WQPP-9, WQPP-19)
- Wildlife Disturbance GF (RE-2, WD-1 to WD-3), MB (MMST-2, MMST-4 to MMST-7)
- Tidepool Protection MB (TP-1)

## **NORTHERN MANAGEMENT AREA (NMA) EDUCATION AND OUTREACH**

GFNMS education staff will be the lead on education programs in the NMA and will ensure that the MBNMS education coordinator is informed about all education activities taking place in the NMA. One of the overall goals for education and outreach in the NMA, and more broadly across the region, is to capitalize on the strengths and expertise of individual staff regardless of their site location. As such, staff from either site may be requested to consult on projects in the NMA based on their area of expertise. There are many education, outreach and volunteer programs already being implemented by both sites in the NMA and many more issue-based programs that could be jointly or separately implemented. The education staff from the two sites will continue to discuss opportunities for collaborative implementation of these programs and activities. Though the actual issue and expertise of staff will factor into who ultimately works on an education or outreach issue, the following protocol provides a general guideline:

- Issue primarily located in the MBNMS and straddles the NMA (e.g., Multicultural Education for Resource Issues Threatening Oceans (MERITO) multicultural education): the MBNMS staff takes the lead and coordinates with the GFNMS staff.
- Issue primarily located in the GFNMS and straddles the NMA (e.g., Sanctuary Explorers Summer Camp): the GFNMS staff takes the lead and coordinates with the MBNMS staff.
- Issue only located in the NMA (e.g., Pillar Point outreach): the GFNMS staff takes the lead and coordinates with the MBNMS staff.

When addressing some education and outreach issues, sanctuary superintendents may seek advice and recommendations from their respective advisory councils. The following protocols provide general guidance as to how the advisory councils will be involved on education and outreach issues affecting the NMA.

- Primarily in the MBNMS and straddles the NMA: Issue first goes to the MBNMS Advisory Council for action. Their recommendations are forwarded to the GFNMS Advisory Council for comment and action.
- Primarily in the GFNMS and straddles the NMA: Issue first goes to the GFNMS Advisory Council for action. Their recommendations are forwarded to the MBNMS Advisory Council for comment and action.
- Only in the NMA: Issue first goes to GFNMS Advisory Council for action. Their recommendations are forwarded to the MBNMS Advisory Council for comment and action.

If there are fundamental differences in the recommendations between the advisory councils, a joint working group will be formed to resolve the differences. If no resolution can be reached, the separate recommendations from the advisory councils will be forwarded to the sanctuary superintendents, who will consider both recommendations before making a decision.

**STRATEGY XNEO-1: *Transfer, Establish and Implement School Programs in the NMA.***

**Activity 1.1** Coordinate and implement both GFNMS and MBNMS classroom activities (i.e., Oceans Week, etc.) to promote a greater awareness of the sanctuaries in schools.

**Products:** Six classroom presentations per year.

**Partners:** GFNMS, MBNMS, Farallones Marine Sanctuary Association (FMSA) education staff, Cabrillo School District, Pescadero School District, other San Mateo County schools

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>ED-1 to ED-6 &amp; XCO-3</b>
	<b>MB</b>	<b>OA-5, MERITO-1 to MERITO-3, others within various issues</b>

**Activity 1.2** Establish a sanctuary education group comprised of teachers and other marine educators/communicators to share information and ideas.

**Products:** A periodic compilation of suggestions for new/expanded school programming.

**Partners:** GFNMS, MBNMS, CBNMS education staff, San Mateo, San Francisco, Marin, and Sonoma County schools, advisory council members, informal marine educators

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>ED-1 &amp; ED-4</b>
	<b>MB</b>	<b>MB OA-3.2, MERITO-2</b>

**Activity 1.3** Expand the Long-term Monitoring Program and Experiential Training for Students (LiMPETS) student monitoring program by identifying more potential locations along the NMA coastline and providing training to teachers and students.

**Products:** Student monitoring data – rocky intertidal, sand crab.

**Partners:** GFNMS, MBNMS, FMSA education staff, Cabrillo School District, Pescadero School District, other San Mateo County Schools

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-1 to ED-6, WD-2</b>
	<b>MB</b>	<b>OA-4, TP-2</b>

**Activity 1.4** Identify and pursue partnerships and funding opportunities to expand the MBNMS MERITO Program to the NMA.

**Products:** Watershed Activity Guide, Marine Conservation Kits, train-the-trainers workshops, weekly outings for after school programs, kayak days, tidepool days, hiking days, PSA (Spanish/English), Web page updates.

**Partners:** GFNMS, FMSA education staff, MBNMS MERITO staff, Cabrillo School District, Pescadero School District, other San Mateo County schools, Pescadero Conservation Alliance, Boys & Girls Club, California State Parks

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>MB</b>	<b>MERITO-1 to MERITO-6</b>

**STRATEGY XNEO-2: *Develop and Implement Community Outreach and Stewardship Programs.***

**Activity 2.1** Represent the NMSP at local fairs and community events.

**Products:** Joint traveling displays at such events as the Half Moon Bay Dream Machines (Fly-In) Bay Area Paddle Fest, Toast to the Coast, and the Pigeon Point Lighthouse annual lighting celebration for GFNMS, MBNMS, and CBNMS.

**Partners:** NMSP, GFNMS, MBNMS and CBNMS education staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-7</b>

**Activity 2.2** Develop and implement a lecture series for the NMA, consistent with lecture offerings in GFNMS and MBNMS.

The initial series may focus on lighthouses of the sanctuaries and historic maritime commerce of the coast.

**Products:** Six lectures per year.

**Partners:** GFNMS/MBNMS/CBNMS education staff, FMSA, other resource agencies

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-8</b>

**Activity 2.3** Coordinate and enhance citizen volunteer opportunities, including Beach Watch and Snapshot Day/First Flush to support resource protection objectives.

**Products:** Volunteer cross-trainings; expansion of NMA volunteer opportunities.

**Partners:** GFNMS, MBNMS, CBNMS education staff, FMSA, other resource agencies

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-7, IS-5, WD-2, WD-4</b>
	<b>MB</b>	<b>OA-4</b>

**STRATEGY XNEO-3: *Develop and Disseminate Outreach Materials in the NMA.***

**Activity 3.1** Disseminate existing GFNMS and MBNMS materials throughout the NMA.

**Products:** Distribution of existing education and outreach materials at select locations throughout the NMA.

**Partners:** GFNMS, MBNMS education staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-10 to ED-14</b>
	<b>MB</b>	<b>varies by issue</b>

**Activity 3.2** Prepare and submit periodic articles on NMA issues for local and regional newsletters and other sanctuary publications.

**Products:** Four-six articles per year.

**Partners:** GFNMS, MBNMS education staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>WD-6, ED-11</b>
	<b>MB</b>	<b>OA-5.11</b>

**Activity 3.3** Coordinate the development of maps for use by GFNMS, MBNMS and CBNMS, including a bathymetric map of the north-central California sanctuaries and a geographic information systems (GIS) map of the three with all sanctuary offices, anchorages/safe harbors and wildlife viewing.

**Products:** Bathymetric map and GIS map of CBNMS/GFNMS/MBNMS.

**Partners:** GFNMS, MBNMS, CBNMS staff, FMSA, MBNMSF

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-11</b>
	<b>MB</b>	<b>OA-5.10</b>

**Activity 3.4** Engage the community and user groups on how best to involve and inform them about issue-specific resource management issues (i.e., Mavericks, water quality, SF exemption area).

**Products:** Community workshops, brochures, displays, website content.

**Partners:** GFNMS, MBNMS subject matter staff

Cross-Reference: Varies by issue and site

**Activity 3.5** Develop NMA–related links between GFNMS and MBNMS websites. Explore options for Internet collaboration beyond the NMA to strengthen relationships with the San Francisco Bay Area population.

**Products:** GFNMS and MBNMS websites that contain information and links to the NMA; expanded joint Web products.

**Partners:** GFNMS, NMSP, MBNMS Web staff

	Sanctuary	Management Plan Strategy Reference
Cross-Reference:	<b>GF</b>	<b>ED-11), XNRM-2 &amp; NMA Decision Document</b>
	<b>MB</b>	<b>OA-5.10</b>

#### **STRATEGY XNEO-4: *Implement JMPR Site-Specific Education and Outreach Activities in the NMA***

**Activity 4.1** The GFNMS and MBNMS Education Teams will coordinate on the implementation of JMPR site-specific education and outreach activities in the NMA.

This will be accomplished by exploring opportunities to work proactively with local communities and tapping into existing education and outreach networks (civic groups, environmental organizations, etc.). The teams will link the NMA with efforts to increase awareness of the sanctuaries to communities throughout the greater San Francisco Bay region.

**Products:** Implementation of JMPR education and outreach strategies and activities within the NMA, the greater SF Bay area, and beyond.

**Partners:** GFNMS and MBNMS education staff

Cross-Reference:

- Coastal Development
- Coastal Armoring MB (CA-3)

- Harbors and Dredge Disposal (HDD-5)
- Community Outreach and Awareness
  - Lecture Series & Field Seminars CB (ED-6, ED-8), GF (ED-8), MB (OA-6), XNEO-2, XCO-1
  - Videos, Brochures, websites GF (ED-10, VS-9) & MB (OA-6), XNEO-3, XCO-1
- Ecosystem Protection
  - Benthic Habitats MB (BH-7)
  - Introduced Species GF (IS-5, IS-9) & MB (IS-2)
  - Special Marine Protected Areas MB (MPA-8)
- Education for Students and Teachers CB (ED-7), GF (ED-1 to ED-6), XNEO-1, XCO-2
- Fishing Related Education MB (FER-1 to FER-5)
- Interpretive Enforcement GF (WD-4)
- Interpretive Facilities, Signage, Exhibits CB (ED-4, ED-5), GF (ED-1, ED-9, ED-12, ED-13), MB (IF-1, IF-3, IF-4), XNEO-5
- Maritime Heritage GF (FA-5), XMHR-5, MMHR-6
- Media Outreach CB (Ed-3, PC-3), GF (ED-11), XCO-1
- Multicultural Outreach MB (MERITO-1 to MERITO-7) & XCO-2
- Regulation and Permit Awareness MB (OA-10, OA-11)
- Water Quality
  - Beach Closures and Contamination MB (BC-3, BC-4, BC-6, BC-7)
  - Cruise Ship Discharge MB (CS-2, CS-4)
  - Water Quality Protection Program GF (WQ-2, WQ-9, ED-14), MB (WQPP-1 to WQPP-3, WQPP-6 to WQPP-11, WQPP-13, WQPP-15, WQPP-16, WQPP-18 to WQPP-21)
- Wildlife Disturbance
  - Marine Mammal, Seabird, and Turtle GF (WD-5, WD-6) & MB (MMST-1 to MMST-8)
  - Motorized Personal Watercraft MB (MPWC-3)
  - Tidepool/Rocky Intertidal Protection GF (WD-2) & MB (TP-1, TP-2, TP-5)
- Vessel Traffic GF (VS-9)
- Volunteers/Stewardship in Education and Outreach CB (ED-2), GF (ED-7, WD-2), MB (OA-2), XCO-3

***STRATEGY XNEO-5: Pursue Collaborative Opportunities for Interpretive Signage and Facilities in the NMA***

**Activity 5.1** Develop collaborative partnerships to create and install interpretive signage in the NMA as part of the long-range California-wide sanctuaries interpretive signage plan.

**Products:** 12 trailside signs, 6-8 rail/post mounted signs, 2 large kiosks.

**Partners:** GFNMS, MBNMS education staff, California State Parks, San Mateo Coast Natural History Association, San Mateo County Harbor District, San Mateo County Parks, Half Moon Bay Parks and Recreation

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>ED-9, ED-12, ED-13</b>
	<b>MB</b>	<b>IF-1 to IF-3</b>

**Activity 5.2** Complete development, fabrication, and installation of collaborative interpretive exhibit at Pigeon Point Light Station in partnership with California State Parks, MBNMS, and the San Mateo Coast Natural History Association.

Key themes for interpretation include the maritime history of the area, the establishment of the lighthouse, life and commerce along the coast, and the natural history of sanctuary waters and resources.

**Products:** Interpretive exhibits on the lighthouse, sanctuaries, and natural history of the area.

**Partners:** GFNMS/MBNMS/CBNMS education staff, California State Parks, San Mateo Coast Natural History Association, Pigeon Point Hostel, Pigeon Point Environmental Education Program

	<b>Sanctuary</b>	<b>Management Plan Strategy Reference</b>
Cross-Reference:	<b>GF</b>	<b>ED-13</b>
	<b>MB</b>	<b>IF-1.6</b>

**TABLE XN-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING NORTHERN MANAGEMENT AREA TRANSITION PLAN**

<b>Desired Outcome(s) For This Action Plan:</b>	
<b>Transfer management responsibilities in the NMA from MBNMS to GFNMS in a manner that enhances protection for sanctuary resources and the delivery of programs and services to local communities.</b>	
<b>Performance Measures</b>	<b>Explanation</b>
<p>1. <b>By Year 5, 100% of the resource protection, education and research activities identified in this plan are fully implemented.</b></p> <p>2. <b>Increase the number of education and outreach programming efforts directed at communities in the NMA from 1,000 individuals in Year 1 to 5,000 individuals in Year 5.</b></p>	<p>1. The transfer of management responsibilities from MBNMS to GFNMS in the NMA will be accomplished in a manner that builds upon existing resource protection efforts in this area. Implementation of the strategies in this action plan will clarify each of the sites roles and responsibilities, increase coordination, resource and expertise sharing, and ultimately enhance resource protection and outreach efforts to local communities.</p> <p>2. One of the main purposes of this action plan is to ensure that the delivery of products, services and programs to communities in the NMA is increased. Implementation of this action plans targets outreach to local communities in the NMA. Some of the activities include schools and teachers, volunteers, fairs and festivals, visitor centers, public lecture series, etc.</p>

**TABLE XN-2: CROSS-CUTTING NORTHERN MANAGEMENT TRANSITION PLAN TIMELINE**






<b>NORTHERN MANAGEMENT AREA TRANSITION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
NMA Administration and Operations					
Strategy XNAO-1: Create a Multi-Functional HMB Regional Office					
<b>Activity 1.1: Expand the existing Half Moon Bay (HMB) office, or relocate to a new location.</b>			→		
Strategy XNAO-2: Evaluate the Delivery and Success of NMSP Programs and Services in the NMA					
<b>Activity 2.1: Conduct an evaluation of the delivery and success of NMSP programs and services to local communities in the NMA.</b>	→	→	→	→	→
NMA Resource Protection					
Strategy XNRP-1: GFNMS will be Responsible for Permit Activities in the NMA					

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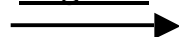
<b>NORTHERN MANAGEMENT AREA TRANSITION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Activity 1.1:</b> GFNMS will process permits within the NMA, except for water quality permits, which will continue to be overseen by MBNMS.	_____	_____	_____	_____	_____➔
<b>Activity 1.2:</b> GFNMS staff will take the lead in considering the development of protocols for a Special Use Permit for tow-in surfing at Mavericks as envisioned in the MBNMS revised management plan and coordinate such proposed actions with MBNMS staff.		_____➔			
Strategy XNRP-2: GFNMS will be Responsible for Regulatory Activities in the NMA While Maintaining Maximum Consistency and Protection to Sanctuary Resources					
<b>Activity 2.1:</b> GFNMS staff will take the lead in evaluating a potential new dredge disposal site for Pillar Point Harbor should a detailed site proposal be developed by the San Mateo County Harbor District for submission to federal and state agencies.		_____➔			
<b>Activity 2.2:</b> GFNMS staff will facilitate a public process in the next five years to consider whether the San Francisco Exemption Area (“the donut hole”) should be included in the MBNMS.			_____➔		
<b>Activity 2.3:</b> The GFNMS and MBNMS Resource Protection Teams will closely coordinate on any future proposed regulatory changes that could impact the NMA or the other sanctuaries.	_____➔				
Strategy XNRP-3: GFNMS Staff Will Coordinate Existing and Emerging Resource Protection Issues in the NMA					
<b>Activity 3.1:</b> GFNMS staff will lead efforts to coordinate and implement JMPR site-specific activities to support resource protection and stewardship in the NMA and the delivery of services and programs to local communities.	_____➔				
<b>Activity 3.2:</b> GFNMS staff will lead efforts to consult and coordinate on resource protection issues with other local, state and federal resource management agencies in the NMA.	_____➔				
Strategy XNRP-4: GFNMS Staff Will Coordinate Enforcement Activities in the NMA					
<b>Activity 4.1:</b> GFNMS staff will oversee the planning and implementation of all NMA enforcement activities in the NMA and will coordinate with MBNMS to ensure consistency across the sites.	_____➔				
Strategy XNRP-5: GFNMS Staff Will Coordinate NMA Emergency Response Activities in the NMA					
<b>Activity 5.1:</b> GFNMS staff will lead and closely coordinate efforts to respond to emergencies in the NMA to ensure maximum resource protection to sanctuary resources.	_____➔				
Strategy XNRP-6: MBNMS Water Quality Protection Program Staff Will Continue to Coordinate Water Quality Activities in the NMA					
<b>Activity 6.1:</b> Implement existing WQPP Activities.	_____➔				
<b>Activity 6.2:</b> Conduct Site Water Quality Needs Assessment.	_____➔				
<b>Activity 6.3:</b> Review and issue water quality authorizations.	_____➔				
NMA Research & Monitoring					
Strategy XNRM-1: Share Information					
<b>Activity 1.1:</b> Develop and implement procedures for sharing information on existing research and monitoring projects and coordinate on future projects.	_____➔				

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<b>NORTHERN MANAGEMENT AREA TRANSITION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Strategy XNRM-2: Coordinate Research and Monitoring Information Dissemination					
<b>Activity 2.1: Update, cross-link, and develop Web products for GFNMS, MBNMS and SIMoN websites.</b>	—	—	—	—	→
Strategy XNRM-3: Collaborate on Sanctuary Advisory Committees and Working Groups on Research and Monitoring Issues Related to the NMA					
<b>Activity 3.1: Assess current and future NMSP participation on technical advisory committees or working groups in the NMA (such as Fitzgerald Marine Reserve, MBNMS RAP).</b>	—	—	—	—	→
Strategy XNRM-4: Collaborate on Volunteer Monitoring Efforts Related to the NMA					
<b>Activity 4.1: Continue efforts to coordinate and collaborate Beach Watch and Beach COMBERS volunteer monitoring programs.</b>	—	—	—	—	→
Strategy XNRM-5: Implement JMPR Site-Specific Research and Monitoring Activities in the NMA					
<b>Activity 5.1: The GFNMS and MBNMS Research Teams will coordinate on the implementation of JMPR site-specific and cross-cutting ecosystem research and monitoring activities in the NMA.</b>	—	—	—	—	→
NMA Education & Outreach					
Strategy XNEO-1: Transfer, Establish and Implement School Programs for the NMA					
<b>Activity 1.1: Coordinate and implement both GFNMS and MBNMS classroom activities (i.e., Oceans Week, etc.) to promote a greater awareness of the sanctuaries in schools.</b>	—	—	—	—	→
<b>Activity 1.2: Establish a sanctuary education group comprised of teachers and other marine educators/communicators to share information and ideas.</b>	→				
<b>Activity 1.3: Expand the LiMPETS student monitoring program by identifying more potential locations along the NMA coastline and providing training to teachers and students.</b>	—	→	.....	.....	→
<b>Activity 1.4: Identify and pursue partnerships and funding opportunities to expand the MBNMS MERITO Program to the NMA.</b>			—	—	→
Strategy XNEO-2: Develop and Implement Community Outreach and Stewardship Programs					
<b>Activity 2.1: Represent the NMSP at local fairs and community events.</b>	—	—	—	—	→
<b>Activity 2.2: Develop and implement a lecture series for the NMA, consistent with lecture offerings in GFNMS and MBNMS.</b>	—	—	—	—	→
<b>Activity 2.3: Coordinate and enhance citizen volunteer opportunities, including Beach Watch and Snapshot Day/First Flush to support resource protection objectives.</b>	—	—	—	—	→
Strategy XNEO-3: Develop and Disseminate Outreach Materials in the NMA					
<b>Activity 3.1: Disseminate existing GFNMS and MBNMS materials throughout the NMA.</b>	—	—	—	—	→
<b>Activity 3.2: Prepare and submit periodic articles on NMA issues for local and regional newsletters and other sanctuary publications.</b>	—	—	—	—	→
<b>Activity 3.3: Coordinate the development of maps for use by GFNMS, MBNMS and CBNMS, including a bathymetric map of the north-central California sanctuaries and a GIS map of the three with all sanctuary offices, anchorages/safe harbors and wildlife viewing.</b>	—	→			

<b>NORTHERN MANAGEMENT AREA TRANSITION PLAN</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Activity 3.4: Engage the community and user groups on how best to inform them about issue-specific resource management issues (i.e., Mavericks, water quality, SF exemption area).</b>					
<b>Activity 3.5: Develop NMA-related links between GFNMS and MBNMS websites. Explore options for Web collaboration beyond the NMA to strengthen relationships with the Internet-savvy San Francisco Bay Area population.</b>					
Strategy XNEO-4: Implement JMPR Site-Specific Education and Outreach Activities in the NMA					
<b>Activity 4.1: The GFNMS and MBNMS Education Teams will coordinate on the implementation of JMPR site-specific education and outreach activities in the NMA.</b>					
Strategy XNEO-5: Pursue Collaborative Opportunities for Interpretive Signage and Facilities in the NMA					
<b>Activity 5.1: Develop collaborative partnerships to create and install interpretive signage in the NMA as part of the long-range California-wide Sanctuaries Interpretive Signage Plan.</b>					
<b>Activity 5.2: Complete development, fabrication, and installation of collaborative interpretive exhibit at Pigeon Point Light Station in partnership with California State Parks, MBNMS, and the San Mateo Coast Natural History Association.</b>					

**Legend:**



Planned Activity



Proposed Activity, based on internal assessment

**TABLE XN-3: ESTIMATED COSTS TO IMPLEMENT THE CROSS-CUTTING NORTHERN MANAGEMENT AREA TRANSITION PLAN**

**\*\*All costs for this action plan are for GFNMS only except where noted for MBNMS\*\***

Strategy	Estimated Annual Cost (1000's)*					Total Est. 5-Year Cost (1000's)
	YR 1	YR 2	YR 3	YR 4	YR 5	
<b>NMA Administration &amp; Operations</b>						
Strategy XNAO-1: Create a Multi-Functional HMB Regional Office	\$33	\$33	\$48	\$48	\$33	\$195
Strategy XNAO-2: Evaluate the Delivery and Success of the NMSP Programs and Services to the NMA	\$8	\$8	\$8	\$8	\$8	\$40
<b>NMA Resource Protection</b>						
Strategy XNRP-1: GFNMS Will Be Responsible for Permit Activities in the NMA	\$23	\$52	\$52	\$18	\$18	\$163
Strategy XNRP-2: GFNMS Will Be Responsible for Regulatory Activities in the NMA While Maintaining Maximum Consistency and Protection to Sanctuary Resources	\$18	\$18	\$18	\$109.5	\$112	\$275.5
Strategy XNRP-3: GFNMS Staff Will Coordinate Existing and Emerging Resource Protection Issues in the NMA	\$16	\$16	\$16	\$16	\$16	\$80
Strategy XNRP-4: GFNMS Staff Will Coordinate Enforcement Activities in the NMA	\$16	\$61	\$61	\$61	\$61	\$260
Strategy XNRP-5: GFNMS Staff Will Coordinate NMA Emergency Response Activities in the NMA	\$16	\$61	\$61	\$61	\$61	\$260
Strategy XNRP-6: MBNMS Water Quality Protection Program Staff Will continue to coordinate Water Quality Activities in the NMA	(\$50)	(\$50)	(\$50)	(\$50)	(\$50)	(\$250)
<b>NMA Research &amp; Monitoring</b>						
Strategy XNRM-1: Share Information	\$16	\$16	\$16	\$16	\$16	\$80
Strategy XNRM-2: Coordinate Research and Monitoring Information Dissemination	\$20	\$20	\$20	\$20	\$20	\$100
Strategy XNRM-3: Collaborate on Sanctuary Advisory Committees and Working Groups on Research and Monitoring Issues Related to the NMA	\$9	\$9	\$9	\$9	\$9	\$45

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Strategy	Estimated Annual Cost (1000's)*					Total Est. 5-Year Cost (1000's)
	YR 1	YR 2	YR 3	YR 4	YR 5	
<b>Strategy XNRM-4: Collaborate on Volunteer Monitoring Efforts Related to the NMA</b>	\$8	\$8	\$8	\$8	\$8	\$40
<b>Strategy XNRM-5: Implement Jmpr Site-Specific Research and Monitoring Activities in the NMA</b>	\$9	\$9	\$9	\$9	\$9	\$45
<b>NMA Education &amp; Outreach</b>						
<b>Strategy XNEO-1: Transfer, Establish and Implement School programs for the NMA</b>	\$30	\$30	\$130	\$130	\$130	\$450
<b>Strategy XNEO-2: Develop and Implement Community Outreach and Stewardship Programs</b>	\$20	\$20	\$20	\$20	\$20	\$100
<b>Strategy XNEO-3: Develop and Disseminate Outreach Materials in the NMA</b>	\$30	\$30	\$30	\$30	\$30	\$150
<b>Strategy XNEO-4: Implement Jmpr Site-Specific Education and Outreach Activities in the NMA</b>	\$20	\$20	\$20	\$20	\$20	\$100
<b>Strategy XNEO-5: Pursue Collaborative Opportunities for Interpretive Signage and Facilities in the NMA</b>	\$40	\$40	\$20	\$20	\$20	\$140
<b>Total Estimated Annual Cost</b>	\$332	\$451	\$546	\$603.5	\$591	\$2,523.5
<b>* Cost estimates are for both “programmatic” and “base” (salaries and overhead) expenses.</b>						
<b>** Contributions from outside funding sources also anticipated.</b>						
<b>**All costs for this action plan are for GFNMS only except where noted in parentheses for MBNMS. The total estimated cost does not include MBNMS expenses.</b>						